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# 2003 SENATE HUMAN SERVICES

SB 2272

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#### 2003 SENATE STANDING COMMITTEE MINUTES

#### **BILL/RESOLUTION NO. SB 2272**

Senate Human Services Committee

**Conference** Committee

Hearing Date January 28, 2003

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Minutes:

SENATOR JUDY LEE opened the Public Hearing on SB 2272 which is a bill for an Act to create and enact a new section relating to x-ray operators.

**REPRESENTATIVE TODD PORTER**, from District 34 in Mandan, introduced the bill.

(Written testimony, copy of Measure Actions, and comments to proposed amendments memos

are attached) (Meter # 2210 - 2836)

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SENATOR RALPH KILZER: Left written testimony in favor of the bill which is attached.

SENATOR LEE: Do you think there should be additional amendments that would talk about the certification of the individual?

REPRESENTATIVE TODD PORTER: Yes, I do. (Meter # 2860 - 2963)

REPRESENTATIVE LISA MEIER: Stated that she was not going to testify but was in support of the bill.

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Page 2 Senate Human Services Committee Bill/Resolution Number SB/ 2272 Hearing Date January 28, 2003

AMY HOFMANN, Mmgt, BSRT, RDMS, with North Dakota Society of Radiologic Technologists, testified in favor of the bill. (Written testimony) Meter #3083 - 3679) AMY HOFMANN: Talked about proposed amendments to the bill. (Attached copy) (Meter # 3680 - 3973) SENATOR BROWN: What do you mean non-creditential x-ray operators? AMY HOFMANN: Credentialed, I am referring to registered radiological technologists. (Meter

3996 - 4080)

SHIRLEY PORTER, representing North Dakota Society of Radiologic Technologists, testified in

favor of the bill. (Written testimony) (Meter # 4150 - 4933)

Discussion regarding question regarding difference between technologists and x-ray operator?

Methods of education and technicians wearing badges. (Meter 4946 - 5726)

KAREN MACDONALD, Nurse Practitioner, testified in favor of the bill. (Written testimony)

(Tape 1, Side B, Meter # 5761 - end and Tape 2, Side A, Meter # 0 - 367)

ARNOLD THOMAS, President of North Dakota Healthcare Association, testified in opposition

to SB 2272. (Written testimony) (Meter # 440-664)

Continued discussion regarding continuing education, licensing procedures for equipment and facility meeting standards, training programs, and minimum standards. Continuing ed is a sequencing issue ... when does it come into place. (Meter # 665 - 1500) KEN WANGLER, Radiation Control Program Manager for the North Dakota Department of Health, testified in a neutral position. (Written testimony) He stated that the proposed changes

made by AMY HOFMAN would be acceptable. (Meter # 1531 - 1846)

And the states of the selection of the second The micrographic images on this film are accurate reproductions of records delivered to Modern Information Systems for microfilming and yere filmed in the regular course of business. The photographic process meets standards of the American National Standards Institute (ANSI) for archival microfilm. NOTICE: If the filmed image above is less legible than this Notice, it is due to the quality of the document being filmed. ...... **Uperator's Signature** 

Page 3 Senate Human Services Committee Bill/Resolution Number SB/ 2272 Hearing Date January 28, 2003

SENATOR FISCHER: What would it take to certify all of these operators in your department?

Meter # 1846 - 1860)

KEN WANGLER: Just under 1,000. Need full-time position to certify these people. (Meter

#1874 - 1960)

SENATOR FISCHER: Why not expedited? (Meter 1964 - 2009)

KEN WANGLER: We do not have authority. (Meter # 2028 - 2076)

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SENATOR LEE closed the public hearing on SB 2272. (Meter #2097)

SENATOR LEE reopened the discussion on SB 2272 (Tape 2, Side B, Meter # 1130 -1367)

SENATOR LEE referred to the amendment which does help address the concern Mr. Thomas

had about implementing continuing education requirements. (Meter #1368 - 1424)

Continued discussion referring to no continuing education until 2006 if we pass this, and 80

hours to get CEU's. The Intern TaLisa Nemec to prepare an amendment to clarify waiting 3

years for continuing education. (Meter #1446 - 2103)

Committee adjourned. (Meter # 2210)

SENATOR LEE reopened the committee discussion on SB 2272. Referred to amendment that does help to address the concern that Mr. Thomas had about implementing continued education requirements. (Meter # 1372 - 1424)

SENATOR ERBELE: For clarification, that it would become effective 3 years following adoption.

SENATOR LEE: No continuing education hours required until 2006. (Meter #1449)

Continued discussion on continuing education: (Meter # 1451 - 2072)



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Senate Human Services Committee Bill/Resolution Number SB/ 2272 Hearing Date January 28, 2003

SENATOR LEE: Intern TaLisa was instructed to prepare an amendment clarifying waiting 3

years for continuing education.

The committee was adjourned. (Meter # 2115)

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#### 2003 SENATE STANDING COMMITTEE MINUTES

#### **BILL/RESOLUTION NO. SB 2272**

Senate Human Services Committee

**Conference** Committee

Hearing Date 02/12/03

Tape Number	Side A	Side B	Meter #
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Committee Clerk Signatu	ire Honn	-a Kram	er

Minutes:

Senator Lee opened the discussion on SB 2272. All members were present.

Arnold Thomas, president of the North Dakota Health Care Association, appeared before the committee to provide information and background. He brought the fundamental textbook that they are using in the development of the limited x-ray operator curriculum. There are two radiologists and two certified x-ray technicians who are looking over the text and they will then develop the curriculum. There have been some questions if the training program adequately addresses issues of safety, especially in the area of pediatrics. Mr. Thomas read sections from the pediatric section of the text that pertain to safety. This is also the text being used in Montana. There were also some questions raised about "people from housekeeping" coming in to do x-rays. Mr. Thomas said under the proposed rules only the following professions would be eligible to take the training and perform x-rays on a limited basis: nurse practitioners, RN's, LPN's, advanced paramedics, physical therapists, physical therapy assistants, occupational



Page 2 Senate Human Services Committee Bill/Resolution Number SB 2272 Hearing Date 02/12/03

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therapists, occupational therapy assistants, medical technologists, medical lab technologists, clinical lab technologists, physician assistants and orthopedic physician assistants. They would not be nationally certified but would be recognized by the state as being able to operate x-ray equipment on a limited basis.

Senator Fischer asked how much training is involved?

Mr. Thomas said a minimum of 80 hours plus 120 hours of clinical training.

Senator Fischer asked how we deal with small hospitals?

Mr. Thomas said this program will provide a pool of people where the use of x-ray technologists is not feasible that can provide x-ray services on a limited basis. Until the program is up and running, it is difficult to determine what level of continuing education is necessary. It won't be running until the fall and Mr. Thomas is asking that this bill not be acted on until they can determine what their needs are. He assured the committee that all trainees in the program are health care professionals. This bill has merits on its face but it's too early.

Senator Polovitz asked when these rules will take effect.

Mr. Thomas said in July. There will be a grandfather clause that will allow those currently providing x-ray services without national certification to prove competency.

Senator Fischer asked if the sponsors of the bill are aware of the training program and its requirements?

Mr. Thomas said yes.

Senator Polovitz asked about the fees for the training.

Mr. Thomas said hospitals are currently paying for the training of their employees. The tuition is \$700 for the Montana program which covers fees and room and board. (meter # 3497)



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Page 3 Senate Human Services Committee Bill/Resolution Number SB 2272 Hearing Date 02/12/03

Senator Erbele asked about chiropractors.

Mr. Thomas said physicians and chiropractors are exempt under the rule.

Senator Lee asked who is adopting the rules?

Mr. Thomas said the Health Council adopts the rules. The administration of the rules is through

the department of health's division of radiology.

Mr. Thomas believes we are better off doing continuing education requirements through rule

rather than by statute.

Senator Fischer asked if they have had hearings yet?

Mr. Thomas said they are done, just waiting for legislative action by administrative rules committee.

Dave Peske, representing the medical association, said he is concerned about the talk about rules and enacting them as a statute. He echoes Mr. Thomas' remarks that the medical association had a radiologist involved in developing the rules and the bill is not necessary.

It was moved by Senator Brown, seconded by Senator Erbele and passed on a roll call vote that the Senate Human Services Committee take a Do Not Pass action on SB 2272. Voting yes were Senators Lee, Erbele, Brown, Fisher, Polovitz, and Fairfield. There were no negative votes cast. Senator Brown will carry the bill to the floor.

Senator Lee adjourned the meeting of the Senate Human Services Committee.

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#### 2003 SENATE STANDING COMMITTEE MINUTES

#### BILL/RESOLUTION NO. SB 2272

Senate Human Services Committee

**Conference** Committee

Hearing Date February 17, 2003

Tape Number	Side A	Side B	Meter #
2	X		1977 - 4370
Committee Clerk Signature	Dom	na Kra	mer

Minutes:

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SENATOR JUDY LEE opened the committee discussion on SB 2272 pertaining to education for x-ray operators. This bill had been brought back

SENATOR RICHARD DEVER, from District 32 and a sponsor of the bill, expressing his appreciation for the willingness of the committee to reconsider the action and to apologize that he never followed this a little more closely than he should have. This bill was brought at the request of x-ray technicians. Two years a similar bill failed. ... X-ray techs would like to see the 12 hours of continuous training in a two year period. The amendment which delays implementation after 3 years, it allows the opportunity for further consideration of those rules. ... (Meter # 1982 - 2521)

REPRESENTATIVE TODD PORTER: Commented on prescribing number of laws in law. Did not know if that was the method we want to take or just making it so that there was a continuing



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Page 2 Senate Human Services Committee Bill/Resolution Number SB 2272 Hearing Date February 17, 2003

education requirement. Component is required that there is continuing education. (Meter #2590

- 2700)

SENATOR LEE: You would be receptive to the idea of amending with a 3 year delay, but also

deleting the number of hours?

**REPRESENTATIVE TODD PORTER:** Absolutely.

Committee discussion with REPRESENTATIVE TODD PORTER regarding intent of

legislature, delayed implementation - route to go. (Meter #2718 - 3070)

SENATOR FISCHER: If we were to take this up in discussion, could we put on the bill that it

would have to be implemented by a certain date? (Meter # 3070 - 3140)

ARNOLD THOMAS, President of Healthcare Association, stated the rules have an

implementation date as soon as the legislative rules committee passes them out. Continued

explanation. (Meter #3157 - 3446)

SENATOR LEE: Asked what the committee wished? Further discussion regarding the

amendment for continued education, hearings, proposed amendment on hours and deleting every

two years. (Meter #3455 - 4205)

SENATOR POLOVITZ made a motion to adopt the amendment as proposed with the addition of deleting the specific 12 hour requirement every two years.

SENATOR BROWN seconded the motion.

Roll call was held. 6 yeas 0 nays.

SENATOR BROWN moved do pass as amended.

SENATOR POLOVITZ seconded the motion.

Roll call was held. 6 yeas. 0 nays.



Page 3 Senate Human Services Committee Bill/Resolution Number SB 2272 Hearing Date February 17, 2003

SENATOR BROWN to be the carrier.

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The committee discussion was closed. (Meter #4370)

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# REPORT OF STANDING COMMITTEE (410) February 12, 2003 12:51 p.m.

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Module No: SR-27-2395 Carrier: Brown Insert LC: . Title: .

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REPORT OF STANDING COMMITTEE SB 2272: Human Services Committee (Sen. J. Lee, Chairman) recommends DO NOT PASS (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2272 was placed on the Eleventh order on the calendar.





Adopted by the Human Services Committee February 17, 2003

30680.0101 Title.0200

# PROPOSED AMENDMENTS TO SENATE BILL NO. 2272

Page 1, line 6, after "rules" Insert ", to become effective August 1, 2006," Page 1, line 7, replace "report a minimum of twelve hours of" with "obtain" Renumber accordingly



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If the vote is on an amendment, briefly indicate intent:



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If the vote is on an amendment, briefly indicate intent:



### REPORT OF STANDING COMMITTEE (410) February 18, 2003 9:50 a.m.

#### Module No: SR-31-3053 Carrier: Brown Insert LC: 30680.0101 Title: .0200

#### **REPORT OF STANDING COMMITTEE**

SB 2272: Human Services Committee (Sen. J. Lee, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends DO PASS (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2272 was placed on the Sixth order on the calendar.

Page 1, line 6, after "rules" insert ", to become effective August 1, 2006,"

Page 1, line 7, replace "report a minimum of twelve hours of" with "obtain"

Renumber accordingly







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#### 2003 HOUSE STANDING COMMITTEE MINUTES

#### **BILL/RESOLUTION NO. SB 2272**

#### House Human Services Committee

**Conference Committee** 

Hearing Date March 10, 2003

Tape Number	Side A	Side B	Meter #
2		x	0.0 - 37.3
Committee Clerk Signatu	ire Shahm	Kenfrau	L
Minutes:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

<u>Sen. Dever</u>: appeared as cosponsor of the bill stating this is a simple bill involving training for x-ray operators. This bill is to provide for continuing education training, during the interim there was an administrative rules put together that put together the basis for that training and this is to provide the continuing education.

**<u>Rep. Potter</u>**: I didn't understand what the last line meant.

Answer: The point is that Children are different than adults, they need to be treated differently. <u>Rep. Porter</u>: appeared as cosponsor with written testimony. The first part of it would be on going education, the other area of concern that I had was dealing with pediatric patients because you can't just treat them like tiny adults, you have a limited x-ray operator that can be trained within the rules for 120 hours of training, what this is saying is that there's also going to be minimum standards for those limited x-ray operators in dealing with pediatric patients, so that they understand the anatomy and physiology of the pediatric patients. That is the basis of the



Page 2 House Human Services Committee Bill/Resolution Number SB 2272 Hearing Date March 10, 2003

bill, there is one technical correction that needs to be made that was asked for in the Senate, on line 6, the word counsel should be over struck and the word department inserted.

<u>**Rep. Niemeier</u>**: With a limited operator, are they limited to only certain procedures? Answer: Yes</u>

<u>Rep. Amerman</u>: August 1, 2006 this would become effective, is that because it takes that long to train and education?

Answer: The base line rules were just approved by the Health Counsel in January and the implementation process for starting the course and will be mirrored after some courses that are taking place in Montana, in order to get the first base line course in place under the grandfathering clause that's included the initial set of rules and be the time everything kinda pans out, it was felt that the next phase of this should start in 2006.

<u>Rep. Niemeier</u>: So this 2 year post education would apply to the degree x-ray people as well? Answer: no, they would be categorized through the Health Dept. as a limited operator. This is more for the limited practice of radiology in a setting just for infants where the physician might have limited staff and they use their lab tech to also take limited x-ray pictures.

<u>Amy Hofmann</u>, ND Society of Radiologic Technologists (NDSRT) appeared in support with written testimony.

Questions of the committee of whose on the Health Council, how many hours are approved for a limited operator and continuing education and standards.

Shirley Porter, Registered Radiologic Technologist, ND Society of Radiologic Technologists (NDSRT) appeared in support with written testimony.

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Page 3 House Human Services Committee Bill/Resolution Number SB 2272 Hearing Date March 10, 2003

<u>Rep. Niemeier</u>: Requirements in the bill are going to be helpful, but as a limited operator with only 83 hours of training, do you see problems?

Answer: The limited radiographers, the new rules with the State Health Dept. they are actually going to require some medical background. I feel comfortable that that will at least help that they have to have an allied health background. Before it truly was the receptionist and it truly is housekeeping staff and janitorial staff carrying pagers. Also I think it will help that there is limited exams that those limited operators are allowed to perform, they are going to be confined to strictly doing chest x-rays and then actually in the rules and regs its spelled out what views of a chest they are allowed to do, etc. If they want to go beyond their scope of practice that's when they need to go through the emergency clause and expand their scope of practice. The physician that is ordering in that facility needs to be aware of the limited skills and exams that their tech's are going to be able to take.

<u>Rep. Niemeier</u>: I hope that this kind of issue is not going to mean that in our small hospitals we're going to have less professional services.

Answer: I don't believe it will because the exams that small towns are already performing are chest, abdomen and extremities, a majority, there are very few institutions and they are even allowed to do limited spine views. We are not going to allow them to do CT's, MRI's or ultrasounds, that is out of their scope of practice whatsoever. Mammography they wouldn't be able to touch anyway due to federal requirements. No opposition.

<u>Rep. Potter</u> made a motion to move the amendment, second by Rep. Kreidt. Vote: 11 - 0 - 2

<u>Rep. Kreidt</u> moved a DO PASS as Amended, second by Rep. Potter.

VOTE: 11 - 0 - 2 Rep. Pollert will carry the bill.



### 2003 HOUSE STANDING COMMITTEE MINUTES

#### **BILL/RESOLUTION NO. SB 2272**

#### House Human Services Committee

#### **Conference** Committee

Hearing Date March 11, 2003

Tape Number	Side A	Side B	Meter #
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Committee Clerk Signs	ature And	1 Kentral	
Minutes: Committee wo		<i>, , ,</i> , , , , , , , , , , , , , , , ,	

Minutes: Committee work.

Rep. Price: We passed that bill out with the amendments that was requested to change the language from Health Council to Health Dept. and the Health Dept. has no rule making authority, so it has to be Health Council. So we need to reconsider our action and change back to Health Council.

Rep. Potter made a motion to reconsider our action, second by Rep. Pollert.

Vote: 10 - 0 - 3 Porter, Weisz, Devlin gone

Rep. Porter made a motion to remove department and replace it with council, second by Rep.

Pietsch. Vote: 11 - 0 - 2 Weisz & Devlin gone

Rep. Potter made a motion for DO PASS As Amended, second by Rep. Porter

Vote: 11 - 0 - 2 Rep. Pollert to carry the bill



Date: March , 2003 Roll Call Vote #: 1

# 2003 HOUSE STANDING COMMITTEE ROLL CALL VOTES BILL/RESOLUTION NO. SB 2272

Legislative Council Amendmen	~ -				
Action Taken	10 Vas	2H	s Amondeel	·	
Motion Made By Rep. 1	Built	Se	conded By <u>Rep. Po</u>	Her	ور المحرور
Representatives	Yes	No	Representatives	Yes	No
Rep. Clara Sue Price - Chair	V		Rep. Sally Sandvig	V	
Rep. Bill Devlin, Vice-Chair	V	ļ	Rep. Bill Amerman	V	
Rep. Robin Weisz	R	ļ	Rep. Carol Niemeier	~	
Rep. Vonnie Pietsch			Rep. Louise Potter		
Rep. Gerald Uglem					
Rep. Chet Pollert Rep. Todd Porter					
Rep. Gary Kreidt					
Rep. Alon Wieland	A				
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If the vote is on an amendment, briefly indicate intent:



Date: March<sup>||</sup>, 2003 Roll Call Vote #: 2

# 2003 HOUSE STANDING COMMITTEE ROLL CALL VOTES BILL/RESOLUTION NO. SB 2272

House H	UMAN	SERV	ICES	Com	mittee
Check here for Conference Com	mittee				
Legislative Council Amendment Nur	nber _				
Action Taken	$\Sigma$	Pa			
Motion Made By Rep Potte	<u>r</u>	Se	conded By <u>kp</u> , <u>Pie</u>	tsch	
Representatives	Yes	No	Representatives	Yes	No
Rep. Clara Sue Price - Chair	V		Rep. Sally Sandvig	V	
Rep. Bill Devlin, Vice-Chair A		L	Rep. Bill Amerman	V	
Rep. Robin Weisz 💦 🔭			Rep. Carol Niemeier	- V	
Rep. Vonnie Pietsch	V		Rep. Louise Potter	V	
Rep. Gerald Uglem	V		]		
Rep. Chet Pollert	V				
Rep. Todd Porter	V				
Rop. Gary Kreidt					
Rep. Alon Wieland	V			_	
Total (Yes)		No	0		
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If the vote is on an amendment, briefly indicate intent:





# REPORT OF STANDING COMMITTEE (410) March 11, 2003 4:20 p.m.

Module No: HFi-43-4509 **Carrier: Pollert** Insert LC: . Title: .



1/23

## **REPORT OF STANDING COMMITTEE**

SB 2272, as engrossed: Human Services Committee (Rep. Price, Chairman) recommends DO PASS (11 YEAS, 0 NAYS, 2 ABSENT AND NOT VOTING). Engrossed SB 2272 was placed on the Fourteenth order on the calendar.







11, 19

Date

Operator's Signature

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# Proposed amendment to Senate Bill 2272

Section 1. Line 6 after The health-council Insert: department

Line 7 after operators report insert: obtain

Line 7 after years insert: to become effective three years following adoption of this legislation.

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17 Operator's Signature

#### Testimony

#### Senate Bill 2272

#### Senate Human Services Committee

#### January 28, 2003

#### 10:00 a.m.

#### North Dakota Department of Health

Madam Chairman and members of the committee, my name is Ken Wangler. I am the Radiation Control Program manager for the North Dakota Department of Health. The Department of Health is taking a neutral position on Senate Bill 2272. I am here to provide information about training requirements for x-ray operators.

The Department of Health is in favor of the concepts presented in Senate Bill 2272. The Department recently completed a process for adopting initial training requirements for x-ray operators that includes 83 hours of didactic training as well as a clinical competence section. Those requirements will become effective March 1, 2003.

The process of developing those requirements involved an informal committee of stakeholders - including the North Dakota Medical Association and the North Dakota Society of Radiological Technologists - which considered various training options. The requirements contained in Senate Bill 2272 were considered during committee discussions.

Although continuing education units (CEU) are not included in the requirements that become effective in just a few weeks, the Department of Health believes they are an important part of a comprehensive x-ray operator training program. I think this was demonstrated by the overwhelming support for CEUs expressed by those who commented on the rule.

The Department of Health intends to develop CEU requirements as part of a subsequent rule amendment that is expected to occur in the next three to five years. The Department received comments both in support of and opposed to this delay. There were several reasons for delaying the CEU requirement. First, in order to minimize the impact of the new requirements and to ensure that affected parties have adequate time to comply, there is a three-year implementation period for the initial training requirements. Implementation would be complicated by trying to accomplish a CEU requirement at the same time that people are trying to obtain initial training. Secondly, implementing and enforcing the new rules will tax existing Department of Health resources. In addition, implementing a CEU requirement will have an even greater fiscal impact on the program; however, the Department will need time to evaluate the impact. By waiting three to five years, the Department can consider the effectiveness of the new initial training requirements, consider what level of CEU requirements are appropriate and assess the resources necessary to develop and implement a CEU program.

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The Department of Health agrees that operators conducting pediatric x-rays should have special training. The Department believes this issue can be covered in a three-hour segment contained in the new training requirement. The three-hour segment was added in part for that very reason. The specific training standards for x-ray of pediatrics have not yet been spelled out; however the Department is certainly willing to do that and will in fact have to address that issue during implementation of the rule.

That concludes my testimony on Senate Bill 2272. If this Bill does move forward, the Department has several wording changes we would like to propose. I am happy to answer any questions you may have at this time.



# SENATE BILL NO. 2272 Testimony of Arnold R. Thomas, President North Dakota Healthcare Association January 28, 2003

Chairman Lee, Members of the Senate Health and Human Services Committee. I am Arnold Thomas, President of the North Dakota Healthcare Association, before you in opposition to SB 2272.

During the 2001 session, a measure to license x-ray techs was considered by the Legislative Assembly and rejected. After the session, the health department convened a working group to address the issue of limited operator x-ray technicians. The goal was to promulgate a training program through rules that would address both patient safety and operator safety. This process took a little over a year.

The health department promulgated rules which now await approval by the legislative assembly's administrative rules committee. The rules establish a minimum standard for limited operator technicians who are not nationally registered. This standard requires both classroom and hands-on training.

The NDHA is currently working with Bismarck State College to meet the classroom and clinical requirements of the department's final rules. The curriculum will include instruction on how to safely x-ray men, women, and children. It will also include detailed instruction regarding proper and safe positioning, shielding, calibration, and exposure.

The department will exercise oversight through its licensing responsibilities. and will, through its on-site assessment process, be able to determine whether patient and operator safety standards are being met by limited x-ray operators.

During the development of these rules, continuing education was discussed at length. It was not included as a requirement because the curriculum had not yet been put in place and consequently the department had not had the opportunity, through its survey process, to determine what additional competencies might be required for limited operators. Put another way, it didn't make sense to craft continuing education requirements when people had not yet gone through the program.

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Senate Bill No. 2272 directs the health council to adopt rules to establish standards for x-ray operators providing limited pediatric examinations. As I just said, the rules already address this requirement with respect to limited operators and they address it not only with respect to the safety of pediatric x-ray s but also the safety of adult x-rays. If per chance, this bill is referring not to limited operators but to nationally certified x-ray technicians, I respectfully suggest that this is not clear and needs to be clarified by way of amendment.

Secondly, the bill requires that x-ray operators report a minimum of 12 hours of continuing education every two years. Again, with respect to limited operators, this has already been addressed. If per chance the reference is intended to be to nationally certified x-ray techs, the bill needs to be amended to make this clear. In fact, if the bill does apply just to nationally certified x-ray techs, it would seem that the requirements would be appropriately addressed through their national accrediting body and would not even have to be addressed by our state department of health or by our legislative assembly.

We therefore respectfully ask for a do not pass on Senate Bill No. 2272.

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Senate Human Services Committee

Senate Bill 2272

January 28, 2003

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My name is Karen Macdonald, I am a Nurse Practitioner and I have completed eighty hours of basic x-ray techniques in addition to my postmaster's certificate as a family nurse practitioner.

I am testifying in favor of SB 2272, as I believe that the "limited operator" should have mandatory continuing education for patient safety. I served as a representative of the professional nurses association on the committee writing the administrative rules outlining training requirements for x-ray operators.

Taking x-rays is the least favorable part of my job as a nurse practitioner, but it is necessary for patient convenience and safety, as I practice in the rural area, and there is no other person trained to do this. I may only do twelve to fifteen x-rays a month, but this is important when the alternative is a 100 mile round trip. This also is important to our clinic's viability, as patients who needed x-rays and knew they would need to go to the bigger city, would probably by-pass our clinic altogether.

Practicing in a rural area, by myself, requires that I make a concerted effort to stay current, and updated on many conditions, drugs, treatments, etc. It is also important that I have continuing education on x-ray procedures for patient safety.

During our committee work, the department felt it could wait on this until the next rule revision cycle. That would delay it even further as it has been at least three years since we started working on the current regulations.

I am very careful about what pediatric procedures I will do, placing the child's safety above even convenience to the parents. I wish I could say other limited operators did the same, but I believe that some are not even aware of the potential hazards of dealing with children. For this reason, I also support establishing minimum standards for pediatrics.

If you have any questions, I would be happy to try to answer them.

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2003 Human Services Committee SB2272 Testimony submitted by Amy Hofmann, Mmgt., BSRT, RDMS North Dakota Society of Radiologic Technologists (NDSRT) January 28, 2003

Committee Hearing on SB2272

Senate Bill 2272 if enacted will direct the North Dakota Department of Health to adopt rules and regulation requiring x-ray operators to obtain a minimum of twelve hours of continuing education every two years and to establish minimum standards for x-ray operator training and competency in performing pediatric examinations. The intent of this bill is to require limited x-ray operators to complete and document appropriate and applicable continuing education. A general x-ray operator is currently required to maintain 24 continuing education credits every two years to maintain their registry with the American Registry of Radiologic Technologists (ARRT).

Speaking on behalf of the North Dakota Society of Radiologic Technologists (NDSRT), we as professionals support and appreciate the State Health Department's work on the rule change of NDAC 33-10-06.1.a as it pertains to the education, training and competency determination of limited x-ray operators and feel that the process followed for rule change was effective but wish to see further specification on continued education and more detailed training and competency demonstrated in performing pediatric radiologic imaging procedures.

The State Department of Health has received support from the State Health Council on the Department's proposed rule change on NDAC 33-10-06-03.1.a as it pertains to the training requirements for x-ray operators. As practicing professionals in the radiologic health sciences in the state of North Dakota, we feel strongly that an x-ray operator, particularly a non credentialed x-ray operator, be required to complete appropriate continuing education to keep skills and knowledge base current and effective in the area of which they practicing.



The proposed amendments to the bill have developed after we spoke with the SHD on the planned enforcement of the rule change. The amendment to strike the words <u>health council</u> and replacing them with the word <u>department</u> are related to the naming of the appropriate agency and it's responsibilities. The striking of the word <u>report</u> and replacing it with the word <u>obtain</u> came about after discussion with the SHD on how the department intends to implement the new requirements during the routine inspections of facilities. To require the SHD to collect, review and approved said continuing education documents would deter from their time spent on implementing the major changes related to training and education of x-ray operators. This evaluation is to be done during inspections. We do not believe the SHD has adequate resources to administer and manage the entire process. The insertion of the words to become effective three years following adoption of this legislation would allow what we believe is adequate time for the x-ray operators to become aware of the requirement and complete appropriate continuing education.



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#### January 28, 2003

Madam Chairwoman and members of the Senate Human Services committee, my name is Shirley Porter. I represent the North Dakota Society of Radiologic Technologists (NDSRT), a professional organization founded for the express purpose of enhancing the proper and safe delivery of medical radiological services through education.

A limited diagnostic operator (or x-ray operator) is an individual who is not registered with the American Registry of Radiologic Technologists (ARRT) and does not possess the formal training and education to adequately and safely irradiate a child. Pediatric Radiology is an art, which is acquired only through education and practicing of skills. There are numerous exposure factors that can be altered to accommodate an anxious child that does not understand why they must hold still, hold their breath or alleviate the fear that this will not hurt. Newborns and infants are an entirely different world when it comes to performing an x-ray. The genetic risks do exist if an uneducated individual does not understand the long-term effects of the radiation they have the control to dose with a machine. Knowing how to alter the manual and automatic exposure factors is a start but not enough when radiographing children; one must also understand why they must shield the reproductive organs with a lead shield and also the importance of shielding the retinas in newborns. Education is paramount for a quality radiograph to be produced. Even the State Health Department recognizes the importance of this need for additional training. According to a statement that was included in their response to comments received on the proposed changes to the North Dakota Radiological Health Rules 2002 dated from August 15, 2002, quote "the Department does recognize the increased radio-sensitivity of children and therefore feels additional training is appropriate". The route the department chose for pediatric education is to be included in the three hour self study portion according to the same document that was mentioned above. Hopefully this will be set in stone and not just mentioned in passing. Another appropriate area I believe would be beneficial is in the clinical competency portion; there is no


Continuing education: Who among us is so brave as to say that there is nothing new for them to learn. There are continuing education requirements for virtually every area of healthcare personnel from doctors, nurses, pharmacists, teachers, physical therapists, respiratory therapists, medical lab technicians, and medical technologists; also included is the rogistered radiologic technologist. How important is it to you or your child or grandchild that the limited diagnostic operators (x-ray operator) also have on-going educational requirement? I firmly believe it is even more important do to the limited opportunity they have in just volume of exams a limited diagnostic operator would perform. Continuing education provides a mechanism for individuals to fulfill their responsibilities to maintain competency and demonstrate accountability to peers, the public and other healthcare providers. The citizens of North Dakota deserve it but may not know to demand it.



Accessibility of continuing education is not an issue what-so-ever for individuals in the state of North Dakota. It comes down to a matter of personal choice, do you prefer home studies and video tapes, lectures, seminars and workshops or direct readings and quizzes to mail in or do on-line, CD-ROMS, in-services and even college courses. The NDSRT provides an educational video library to rent from and also two one-day workshops along with a two-day state conference. There are also numerous companies that provide continuing education at a competitive price. The American Society of Radiologic Technologists (ASRT), of which the NDSRT is an affiliate, can provide all of your continuing education requirements, including approval, tracking, proof of participation, they even mail you a printout showing you the number of CE's you have on file. Other sources include the EduMed Corporation from Minnetonka, Minnesota, of which the NDSRT is also an affiliate, they provide video rental and home study course, the Radiologic Educational Services company offers home-study programs, Radiological Services offers a wide variety of booklets, tests and seminars. These are only a few sources at our disposal – so accessibility is not an issue.

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Implementation of the whole process does not have to start with the square wheel; there is already a round wheel out there used by the states of Florida, Illinois, Iowa, Kentucky, Massachusetts, New Mexico, Oregon and Texas. These states currently have licensing agencies in placed approved as meeting American Registry of Radiologic Technologists (ARRT) criteria for this process. The ARRT already recognizes that some states have legislation requiring continuing education credits to maintain compliance with state regulations to practice in the profession. The ARRT also goes so far as to accept the records from the state licensing agencies in Florida, Illinois, Iowa and Kentucky only for the individuals licensed by that state.

Perhaps we could consider the plans of other states that already require continuing education and have this requirement of continuing education start immediately after the implementation period of three years for the current proposed rule change of the Health Department. This three-year delay would give the department time to do their current rule changes and also give time to set continuing education guidelines. As in the past the NDSRT would be more than happy to assist in any fashion as approved by its board of directors.

Once again I appreciate the hospitality of the Senate Human Services committee. Thank you for your valuable time and commitment to the state of North Dakota.



# SENATE HUMAN SERVICES COMMITTEE SENATOR JUDY LEE, CHAIRMAN

# TESTIMONY BY REPRESENTATIVE TODD PORTER

# **IN SUPPORT OF SB 2272**

Chairman Lee and members of the Senate Human Services Committee, for the record my name is Todd Porter, Representative from District 34 in Mandan. I stand before you in favor of SB 2272.

Last session you held a hearing on SB 2409 that would have created a licensing board to oversee lis ensure and educational requirements of individuals performing X-rays in the State of North Dakota. Your hearing concluded that this was a good idea and the bill came out of committee 6-0 DO PASS.

There was considerable work by individuals against this bill to over turn the vote on the floor of the Senate. You'll remember that the individuals stated that the Health Department was working with groups to establish some guidelines to oversee individuals taking X-rays in clinics and hospitals. Two years later the process is still not in place by the department to oversee this process. The Health Council in January just approved the proposed rules from the department.

Missing in my mind were two very important components:

1. Continuing Education. Most every profession, including hospital administrators, physicians, nurses, lab technicians, and EMT's are required to perform some type of continuing education. When I presented this to the department they stated that "continuing education should be a requirement for limited diagnostic operators. However the department does not believe it has the resources to develop and implement a continuing education requirement"

I wonder why the department was so intent on establishing minimum educational requirements to perform an X-ray and was not interested in the ongoing continuing educational requirement of many other professions. What does that message say to the public that entrust a department to assure patient safety.

The department does not have the authority to certify the individual, only the machine. This leaves an area of concern as it relates to individual's ability to perform an exam. The department doesn't have the authority to charge for individual certification and doesn't intend to ask for the authority. Without the overright of the individual the unknowing public will continue to assume



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## Page 2

that they are receiving a quality examination ordered by their physician. We need to make sure that the individual is also certified and with that certification comes the requirement of ongoing education.

Currently the Division of Emergency Health Services certifies individuals in 4 separate areas of expertise. Each of these areas require ongoing education as a requirement to retain certification. This agency works with an association to utilize their education components without the redundancy of spelling out the requirement, but also the record keeping and tracking requirements. My certification as a Paramedic comes with no charge from the department.

2. Pediatric examinations. It was suggested during the rule making process that requirements be drafted to include special education in the area of pediatric examinations and limited degrees of examinations of pediatric patients. A chest x-ray on a pediatric patient is certainly a different procedure than a chest x-ray on an adult patient. I think that the unknowing public deserves this education component. The department in their letter explains that they intend to include a section of pediatrics, but the next review and rules will be 3 to 5 years away.

I ask that you consider your self or your family being subjected to a medical procedure by someone not trained in that procedure or worse yet, someone that was trained 20 years ago on the job and has never kept current with technology through ongoing education. We need to ensure that we have an informed and protected consumer of health care.

Thank you.



# TESTIMONY by Senator Ralph Kilzer To the Senate Human Services Committee Senate Bill 2272

Chairman Lee, and members of the Senate Human Services Committee. It is good to be with you again. As you recall last time we talked about training requirements and licensing requirements for x-ray technicians. It was a very controversial bill and was eventually killed because many small hospitals and clinics felt that it would be too expensive for them to have qualifications or restrictions placed upon the people who take their x-rays.

This bill would require that x-ray operators report a minimum of twelve hours of continuing education every two years and that this would be reported to the Health Department which would also establish minimum standards for x-ray operator provisions of limited pediatric examinations.

This use of the Health Department is probably the proper place because the Health Department is already responsible for licensing and certifying x-ray equipment. The Health Department is responsible for making sure that all devices that emit radiation including gamma rays, x-rays, alpha and beta particles, high-speed electrons, neutrons, protons, and other nuclear particles are monitored. It does not monitor sound waves, radio waves, or light which might be infrared, visible, or ultrasonic.

In the present situation we have no legal qualifications of people who take x-rays. I feel that it is necessary to have some experience and education to the people who take our x-rays. The machines are already being monitored.

If there are any questions, I would be glad to speak to them.



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February 7, 2003

Honorable Judy Lee State Senator

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Dear Senator Judy Lee,

Thank you for your efforts and support in SB 2272. I appreciated your time and attention during the Committee hearing on January 28th.

After listening to all the testimony presented, I feel there are some confusion of details that could be clearer with further explanation. First, the clarification of job titles for x-ray operators - we as Registered Technologists have met criteria to take a national registry exam with the American Registry of Radiologic Technologists (ARRT). This requires us to have completed a 24 month program in the radiologic sciences. The program must be approved by an accrediting agency. The state of North Dakota alone has five such programs, one in Minot, two in Bismarck, one in Fargo and one in Grand Forks (East Grand Forks with clinical rotations in Altru Health Systems). There are approximately 1,000 such programs in the nation. The 24 month programs are designed for general radiographer training. These programs do not train and credential radiologic technologists into the advanced medical imaging technologies such as Ultrasound, Special Procedures/Cardiovascular Radiography, Nuclear Medicine, Radiation Therapy or Magnetic Resonance. Radiologic Technologists seeking training in these advanced medical imaging modalities either receive it in accredited programs of the modality or with extensive on-the-job training, under the direct supervision of an experienced technologist and under the indirect supervision of a radiologist. On-the-job training typically requires 12 months of supervised training. The State Health Department refers to these technologists as general x-ray operators, we refer to ourselves as Radiologic Technologists (RT).

The other level of x-ray operator, as the State Health Department refers to them are **limited x-ray operators**. These are the operators that have **not** completed an accredited radiologic science program and has **not** passed the national registry test of ARRT. This currently covers a very broad scope of training and skill level, from the secretarial support staff "taught" to take an x-ray "picture" in as little as two hours of training to the Nurse Practitioner in the rural clinic. As you can imagine, we are talking about huge variables to determine and define the education, skill and competency of the limited x-ray operator.

In SB 2272, with the amended language, the intent is to establish that the State Health Department require x-ray operators to complete and document continuing education for the purpose on ongoing education and training. As with many tasks and skills, a competency is developed with ongoing skill development and continuous building on a knowledge base. In more remote areas, the infrequency of performing xray procedures could hinder competency development. If an x-ray operator isn't called upon to perform a cervical spine x-ray more than once every three to six months, competency is very difficult to achieve.

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The general radiographer is required by the ARRT to achieve 24 continuing education units (CEU) every two years in order to continue their registry status. The 24 CEUs must meet an approval evaluation. SB 2272 proposed amendment language would require limited x-ray operators to continue with education in the radiology field. Summarizing this, limited x-ray operators will have 3 years after the effective date (March 1, 2003) to complete their required education and training. In this three year time frame, the State Health Department will be evaluating x-ray operators to validate they are compliant with rule and regulation changes. With SB2272 language, x-ray operators will know they need to plan to attend continuing education programs, document them and produce them for the State Health Department at the five year mark.

The discussion of the implementation of the new rules and regulations brought some very pertinent issues to the table, namely, the method the State Health Department proposes to evaluate x-ray operator's training and education while performing the normal rotation of inspections. As I stated during testimony, the State Health Department does not have the necessary resources to conduct inspections of x-ray equipment as well as devote time and effort in evaluating the x-ray operator's education and competency. We (NDSRT) would propose the State Health Department organize an Ad Hoc Committee or Steering Committee to develop a Continuing Education program(s) and be charged with the responsibility of evaluating Continuing Education programs or topics and availability.

I have attached an example of continuing education that Montana has available for limited permit holder operators. Much of what the North Dakota State Health Department has defined for education and training of limited x-ray operators has been based on what the Montana State Health Radiology Board has mandated. This is a good example of what Montana has established for CEUs for limited x-ray operators.

I have attached a copy of the table from the State Health Department titled Reference Table to Determine Limited Scope X-ray Operator Training Requirements. From the table it indicates that x-ray operators that begin actively working as an x-ray operator 6 months prior to effective date of rule change (March 1, 2003) must complete the requirements within one year of effective date. Operators that have been working longer than that, (6 - 24+ months prior to effective date) will have up to three years to complete the education and training. All x-ray operators are required to complete the 80 hours didactic course and the 3 hour North Dakota Course.

We very much appreciate your time and concentration on this patient care issue. Again, our objective as radiologic technologists is to be actively involved in these processes ensuring that the patients of North Dakota, regardless of where they may be receiving their radiology services, get the safest, most cost effective and highest quality of x-ray service that we collectively can get them; procedures done at the hand of a trained, competent and qualified x-ray operator. If you have questions or concerns please feel free to call me at 255-3354.

Amy Hofmann, BSRT, RDMS **Government Relations Chair, NDSRT** 

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Operator's Signatur

operator

Signatur

# REFERENCE TABLE TO DETERMINE LIMITED SCOPE X-RAY OPERATOR TRAINING REQUIREMENTS

	WHEN DID I BEGIN ACTIVELY WORKING AS AN X-RAY OPERATOR?					
		Within Five and a second secon	Seniority initials	6:24 months prior to effective date	24+ months pr effective date Option 1:	
Can I operate prior to completion of requirements?	No	Yes- must meet facilities' existing training standards	Yes	Yes	Yes	
How much time am I allowed to complete the requirements?	Must complete all requirements prior to performing X-ray exams	Requirements must be completed within 1 year of hire date	Requirements must be complete within 1 year of effective date	Requirements must be met within 3 years of effective date	Requirements must be met within 3 years of effective date	Aiten requ mus witt of e dat
Do I need the pre- requisite Allied Health Profession? +++	Yes	Yes	No	No	No	
Do I need the 3 hour State Course?	Yes	Yes	Yes	Yes	Yes	
Do I need the 80 hour didactic course?	Yes	Yes	Yes	Yes	Yes	No- dei hrs tra
Clinical competency	Yes- in accordance with Appendix J	Yes- in accordance with Appendix J	Yes- in accordance with Appendix J	Νο	No	ln vi

+Note: The 24+ months prior to effective date option 2 allows alternate didactic requirements.

++Note: Alternate training includes a total of 80 hours of X-ray related training from short courses and seminars and requires Department review and approval.

+++Note: The prerequisite Allied Health Professions are referenced in Appendix G Part 2.









# "RADIOGRAPHIC POSITIONING REVIEW" Continuing Education for Limited Permit Holders

SUNDAY, NOVEMBER 10, 2002

# 9:00AM-4:00PM (one hour for lunch) MARILLAC AUDITORIUM ST. VINCENT HEALTHCARE BILLINGS, MONTANA

# THIS COURSE IS A "HANDS-ON" LEARNING UNIT SPECIFICALLY DESIGNED FOR PERSONS TAKING X-RAYS IN DOCTOR'S OFFICES AND THE SMALLER COMMUNITY HOSPITALS DUE TO THE NATURE OF THE CLASS THE ATTENDANCE WILL BE LIMITED

Course Objectives: Upon completion of this hands-on radiographic positioning review, the participants will be able to:

- Practice, under supervision, various routine radiographic positioning procedures utilized within their scope of practice
- 2) Review and practice alternative procedures for trauma situations.

## Course Outline:

Radiographic Positioning of the Chest Radiographic Positioning of the Extremities Radiographic Positioning of the Spine Radiographic Positioning of the Skull

#### FEES

\$70 for Learning Center Members, \$90 for Non-Members. This includes all handouts and refreshments during the breaks. You will be on your own for lunch. Late Registration Fee (After November 1) add \$10.00. Registration fee is non-refundable after November 1. A full refund will be made if the program is not held. The sponsor reserves the right to cancel the program if it becomes necessary.

## FOR MORE INFORMATION CONTACT:

Claudia Janecek, Coordinator District 6 Health Care Learning Center PO Box 1378, Billings, Montana 59103-1378 Telephone (406) 248-7102

# HOTEL RESERVATIONS

A block of rooms has been reserved at the JUNIPER INN for November 9 & 10. Hotel reservations need to be made directly with the hotel no later than October 26. Be sure to indicate that you are attending the District 6 Workshop.

JUNIPER INN 1315 North 27<sup>th</sup> Street, Billings, MT. 59101 (406) 245-4128 or 1-800-826-7530

# **"RADIOGRAPHIC POSITIONING REVIEW"**

Registration Deadline: November 1, 2002

# **REGISTRATION FEE:**

\$70 For Learning Center Members

\$90 for Non-Members

Late Registration Fee (after November 1) add \$10.00

NAME.

DRESS

TELEPHONE (Home)

(Work)

ZIP

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\_\_\_\_\_CITY\_\_\_\_STATE\_\_\_\_

## OCCUPATION MAKE CHECKS PAYABLE AND RETURN TO: District 6 Health Care Learning Center PO Box 1378 Billings, MT. 69103-1378

Registration fee is non-refundable after Nov. 1, 2002 A full refund will be made if the program is not held. The sponsor reserves the right to cancel the program if it becomes necessary.

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# NORTH DAKOTA DEPARTMENT OF HEALTH **Environmental Health Section**

Location: 1200 Missouri Avenue Bismarok, ND 58504-5264

Fax #: 701-328-5200

Mailing Address; P.O. Box 5520 Bismarok, ND 58506-5520

MEMO TO Commentors to Proposed Amendments of North Dakota Radiological Health Rules

> Terry L. O'Clair, P.E. Director, Division of

FROM

RE

Department Response to Comments

Air Quality

DATE January 3, 2003 :

This memorandum is to address comments received regarding proposed amendments to North Dakota Administrative Code Article 33-10, "North Dakota Radiological Health Rules." The comment period began July 14, 2002 and ended September 16, 2002. A public hearing was held August 15, 2002.

Forty-one individuals submitted comments and/or requested information regarding the proposed changes. Since the majority of comments received were about the X-ray operator training requirements, a copy of the final draft of that section of the rule is enclosed with this memorandum.

In accordance with the North Dakota Administrative Rule adoption requirements, the Department must address all comments received. Since many of the comments addressed the same issues, the Department grouped the comments together and prepared a single response to each issue.

The Department has submitted a copy of the proposed changes to the Attorney General for an opinion as to the legality of the rule. The decision of the Attorney General's Office will be forthcoming.

The Department will present the proposed changes to the State Health Council for their consideration and approval on January 14, 2003.

Following approval from the Attorney General's Office and the State Health Council, the Department intends to have the Legislative Council publish the final rule. The target date for publication is set for February 1, 2003. The Legislative Administrative Rules Committee will also hold a hearing on the rule for final approval. The date of the Rules Committee hearing is not yet known. Anyone who requested to be advised of the date of that hearing will be contacted when the date is known. If approval is received from all parties concerned the effective date of the rule is expected to be March 1, 2003.

If you have any questions or concerns, please feel free to contact a member of the Radiation Control Program at (701)328-5188.

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Environmental Health	Air	Municipal	Waste	Water

Section Chief's Office Quality Facilities Management Quality 701-328-5150 701-328-5188 701-328-5211 701-328-5166 701-328-5210 Website: www.health.state.nd.us/ndhd/environ Printed on recycled paper. (felowisk strat Sec. Sec. May a subject of the second and with the second The micrographic images on this film are accurate reproductions of records delivered to Nodern Information Systems for microfilming and were filmed in the regular course of business. The photographic process meets standards of the American National Standards Institute (ANSI) for archival microfilm. NOTICE: If the filmed image above is less legible than this Notice, it is due to the quality of the Operator's Signature

# Response to Comments Received On the Proposed Changes to the North Dakota Radiological Health Rules 2002

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On June 18, 2002 the State Health Council gave approval to proceed with accepting comments to proposed changes to the North Dakota Radiological Health Rules. The Radiological Health Rules are contained in North Dakota Administrative Code, Chapter 33-10.

In accordance with NDAC 28-32, Notices of the State's intent to adopt changes to the rules were published in each county newspaper. The notice indicated where copies of the proposed changes as well as the summary of the changes and the regulatory analysis could be obtained. The notice stated that the public comment period would begin on July 15, 2002 and extend through September 16, 2002. Additional information included the time and location of a public hearing that was held on August 15, 2002. The Department also sent a memorandum to approximately 900 radioactive material licensees, X-ray machine registrants and other interested parties. The memorandum contained the above information and a copy of the summary of changes. Finally, the proposed changes were available on the Department's web page and comments were accepted on-line.

Forty-one individuals or organizations submitted comments or requested information related to the proposed rule changes. Comments from seven of the commentors resulted in changes to the proposed rule. The U.S. Nuclear Regulatory Commission, the State Attorney General's Office and the State of Texas provided comments to improve consistency, readability and compatibility between the North Dakota Rule and other State and Federal Regulations. The Radiation Control Program reviewed these comments and adopted the suggested changes that improved the North Dakota Regulation and were not in conflict with the other sections of the regulation or the North Dakota Administrative Rule drafting requirements.

One commentor, an Industrial Radiographer licensee in North Dakota, presented testimony at the public hearing concerning implementation issues with the proposed amendments to Chapter 33-10-05, "Radiation Safety Requirements for Industrial Radiographic Operations". The commentor questioned the procedure for conducting daily checks of personal monitoring devices. These comments were responded to in writing and a copy of the letter is attached in Appendix A.

Five commentors, including two veterinarians, two dentists and a chiropractor, had questions regarding the increase in fees for the registration of X-ray machines. Upon explanation of the fee increases, none of the commentors expressed opposition to the changes.

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The comments from the remaining 32 commentors related to the proposed changes to the X-ray operator training requirements contained in Chapter 33-10-06, "X-rays In the Healing Arts". All comments were directed toward the limited diagnostic operator requirements. No comments were received with regard to the general diagnostic operator requirements.

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North Dakota's X-ray operator training requirements have changed very little since 1968. The current regulation states only that Xray operators be, "adequately instructed in the safe operating procedures and be competent in the safe use of the equipment commensurate with the size, scope and nature of the service". The training must include covering a list of topics identified in Appendix F of Chapter 33-10-06.

This has left X-ray facilities without clear guidance on what level of training is appropriate for their scope of service. While recordkeeping is required, when inspectors ask to review them, training records are often incomplete or nonexistent. Finally, enforcement is particularly problematic and therefore is not done except in the most extreme cases.

Based on the Department's experience while inspecting X-ray machine facilities, the majority of problems related to the operation of Xray machines is due to inadequate operator training and/or competence. This leads to poor quality images, and the need for repeat patient exposures which in turn reduces quality of patient care and increases the risk of cancer.

While many comments were received with differing opinions on the specifics of the proposed training and competency requirements, the majority of commentors indicated they recognized the need for improved training and competency requirements and none of the commentors disagreed with the need to change the status quo.

During each of the last two legislative sessions, legislation has been introduced to establish a professional licensing Board to regulate X-ray operator training, competency and practice. The Department has testified in support of both bills. Neither bill was passed by the Legislature.

Recognizing the potential controversy surrounding new X-ray operator training and competency requirements, the Department assembled an ad hoc committee to consider various options for inclusion into the North Dakota Radiological Health Rules. The committee met in April 2000 and again in August 2000. In addition, numerous communiques were distributed discussing the various training and competency options. The committee was instrumental in

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the development of these requirements. Virtually all of the comments received, as well as numerous other issues, were discussed by the committee while the proposed rule changes were being developed.

Of the 32 commentors who addressed the issue of X-ray operator training, 6 requested clarification only and 5 requested only copies of the changes and/or supporting documentation. The Department delivered the material to all parties who made requests. Four of the comments, which were received before the public hearing, were responded to in writing. Copies of these comments and the response letters are attached in Appendix A.

Nine of the commentors expressed overall support for the proposed rule change, four expressed conditional support, and four were opposed. Several others have concerns with certain issues, but were not expressly opposed to the entire amendment. Two conditional supporters liked the idea of makes prescriptive requirements and a defined limited scope of procedures but felt there should be a continuing education requirement added and that the Department should not allow open book examinations.

Two conditional supporters were opposed to the formal health care background prerequisite requirement in Appendix G for limited diagnostic operators. One of these commentors also requested the Department pursue development of in-state training capabilities, use enforcement discretion until such training is available and submit an annual report to the State Health Council summarizing its compliance findings of operator competency by provider designation. This commentor also felt it was acceptable to delay implementation of a continuing education requirement. The other commentor wanted IVP added in Appendix I as an allowable procedure for limited diagnostic operators.

The four opposed to the rule felt that the scope of practice for the limited diagnostic operator was too broad, there needed to be a continuing education requirement included in this rule revision, the length of training was too short and the Department lacked the resources necessary to adequately enforce the requirements. One opponent also indicated that X-rays involving pediatric patients should require special training provisions and the 'Grandfather' clause was in opposition to earlier Department Legislative testimony. Three in opposition along with three others felt the best way to regulate X-ray operator training was through a governing body such as a Board.

The issues brought up by comments are addressed independently below:

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#### Prerequisite Requirements:

Two comments were received in opposition to this requirement. One reason appeared to be that many of the proposed training requirements are fashioned after the training requirements for the state of Montana. Montana does not have a prerequisite requirement for training of limited scope X-ray operators.

**Response:** During the ad hoc committee discussions, a concern about requiring only 83 hours of didactic training, was the insufficiency of training in general medical technique, protocol and procedure in issues related to such things as proper patient care, patient etiquette, patient handling, medical records confidentiality, etc. It seemed to the committee that individuals with prior training in the medical field were better candidates for limited scope training than individuals who had no prior training or experience in dealing with patients. The committee unanimously supported allowing only those individuals who had some level of prior medical training to be eligible for limited scope operator training. It was decided that the criteria for acceptable prerequisite medical experience would be limited to those fields where at least two years of training and experience were necessary. This length of time seemed appropriate since the training and experience requirements for registration of X-ray technologists is a two-year program. The exception to the two-year training and competency prerequisite requirement was to allow Emergency Medical Technician Paramedics, which is a twelve to fifteen month training program.

The Radiation Control Program recognizes the prerequisite training requirement may be an issue when a facility begins to consider candidates for cross training in limited scope diagnostic X-ray. There are however, several important issues this prerequisite requirement addresses. The limited scope operator training requirements are 83 hours in length. This is compared to over 2,000 hours required for unlimited scope or general diagnostic Xray operator training. Therefore, the limited diagnostic operator training requirements focus exclusively on radiation safety related to such things as proper positioning, technique and film processing. It is not possible in an 83 hour time period to cover many of the other training issues necessary for limited diagnostic X-ray operators. The prerequisite training requirement helps address this issue.

Many commentors, who had concerns with this rule change in general, expressed concern that the limited scope X-ray operator training program would detract from the field of individuals who would want to train for general diagnostic X-ray. The question was posed to the Department, 'why would an individual seeking a career as an Xray operator attend a two-year training program at considerable

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expense when they could attend two-four day weekend courses with much less investment?' They also indicated they did not feel an individual without prior background in patient care could be adequately trained in 83 hours. These concerns will be addressed at least in part by requiring candidates for limited diagnostic training to have prior training and experience in the medical field.

In discussions with Montana state regulatory officials regarding the adequacy of their State's X-ray operator training requirements, the opinion was, 'that the requirements were good but didn't go far enough'. The prerequisite requirement would help address some of Montana's Officials concerns as well.

Finally, the Department has had ongoing discussions with District VI Learning Center about various X-ray operator training issues. District VI is the group that provides training for individuals in Montana to meet that state's requirements. The issue of having a prerequisite requirement was not part of our discussions with them prior to publishing North Dakota's proposed rule. Since that time however, the manager of District VI X-ray program has expressed support for the prerequisite requirement. She indicated that students without prior medical background have a harder time in the class and have a much higher failure rate.

The Radiation Control Program does not anticipate this requirement will result in a shortage of eligible candidates for limited diagnostic X-ray operator training. The list of acceptable disciplines who qualify for cross training as limited diagnostic Xray operators is substantial and most medical facilities have staff in one or several of these disciplines. Therefore, this requirement has been left in place as initially proposed.

#### The allowable scope of procedures is too broad:

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Prior to the first ad hoc committee meeting, the Department proposed a list of procedures allowable for limited scope operators. This list was discussed with individuals who were practicing in the X-ray profession.

The allowable procedures that may be performed by limited diagnostic operators, as identified in Appendix I of the proposed rule, is substantially larger than initially proposed by the Department. Some were also concerned that a broad scope of procedures, such as outlined in Appendix I would negate the need for registered technologists or general diagnostic operators at any facility.

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Another concern was related to expanding the scope of procedures or views on a case-by-case basis. The rule contains a provision for special case-by-case consideration to expand the scope of procedures beyond what is listed in Appendix I for individual facilities who need to add one or two unique procedures they perform on a regular basis.

Thirdly, there was concern expressed about the emergency provision allowing expansion of procedures. In special cases and under the direction of a physician, physician assistant, nurse practitioner or chiropractor the rule allows a limited diagnostic operator to take X-rays outside the scope of procedures listed in Appendix I.

**Response:** The scope of procedures was considered at length and amended during the ad hoc committee discussions. In order to prevent the proposed training requirements from becoming a defacto requirement for using only registered technologists or general diagnostic operators, the scope of procedures were selected in order to allow the basic procedures that smaller hospitals and clinics require to adequately care for their patients.

Another consideration was the type of training offered by the Montana course and what procedures are allowed in Montana. It was felt that if the Montana course covered the necessary instruction for a procedure, the procedure should be allowed in North Dakota's regulation.

In researching the concern of negating the need for registered technologists, it appeared to the Department there are many special procedures not identified in Appendix I which would be reserved for only those qualified as general diagnostic operators in the proposed rule. Appendix I not only lists the type of procedure that is allowed, but the specific views as well. Any unique views not identified in Appendix I, as well as any advanced or more sophisticated procedures such as fluoroscopy, computed tomography, and other special X-ray procedures would not be allowed to be performed by limited diagnostic operators. Additionally, even though North Dakota does not have a certification program for nuclear medicine technologists, hospitals which provide nuclear medicine services generally select registered technologists as candidates for cross-training into nuclear medicine. Finally, this training does not ensure that an individual will be allowed to work as an X-ray operator outside the State of North Dakota.

Regarding the issue of allowing the Department to consider special requests concerning scope of practice, the Department was concerned about allowing the scope of practice to be too broad for the extent of training being required. Therefore, the scope of practice in

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Appendix I was restricted to being as broad as deemed necessary to accommodate the majority of facilities who would not be likely to employ general diagnostic operators. At the same time, the Department recognized there may be special situations and unique needs for procedures not allowed in Appendix I. Therefore, the Department felt that with additional training, this flexibility was justified in order to accommodate the practice at some small or specialized facilities. A majority of the committee agreed with this provision. One committee member was opposed to granting this level of discretion to the Department.

The Department believes it is necessary to allow expanding the scope of procedures in emergency situations. The Department believes it is in the best interest of the patient to allow a practitioner the discretion to ask for special X-ray procedures and views in situations they deem to be an emergency. The emergency provisions contain conditions to prevent practitioners from using this option on a routine basis.

# There needs to be continuing education requirements for limited diagnostic operators:

The technology in the X-ray field is changing rapidly. Many professions, including registered X-ray technologists require continuing education to maintain proficiency.

**Response:** None of the commentors formally or informally expressed opposition to a continuing education requirement. In virtually any forum that this issue was discussed there was agreement that continuing education is an appropriate requirement. The Department also agrees that continuing education should be a requirement for limited diagnostic operators. However the Department does not believe it has the resources to develop and implement a continuing education requirement within the scope of this rule change. A continuing education requirement is a fairly involved and complicated requirement. Not only would the need for continuing education have to be spelled out, but the type of training that would be acceptable, the course approval process and who would conduct the approval, as well as the recordkeeping and tracking requirements would have to be developed and implemented. Some commentors are already concerned it will be difficult for the Department to supply adequate resources to effectively implement the current changes. Adding a continuing education requirement at this time would require additional Department resources to implement. Therefore the Department is proposing to add a continuing education requirement during the next rule revision. The next rule revision is expected to occur within three to five years. Since the implementation period of this regulation is three years, delaying the continuing education requirement until the next

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rule revision does not appear to substantially compromise the adequacy of the training and competency requirements for limited scope operators. One commentor expressly supported delay of a continuing education requirement until the next rule revision.

# The Department lacks the resources to adequately enforce a limited diagnostic training and competency requirement:

Due to limited resources, the Department already has difficulty enforcing current requirements. No additional resources are being added in conjunction with this rule change.

**Response:** The Department agrees that resources are limited. Department staff already have full inspection schedules. This requirement, like all other requirements in the regulation, will be enforced during the normal inspection process by following established enforcement protocol. In as much as it is possible, inspectors will redirect inspection efforts to review compliance with the training requirements while inspecting an X-ray machine facility. It is hoped that a clear training requirement will add some relief to the burden on inspectors since the requirement will be more understandable to facilities and require less case-by-case evaluation by inspectors to determine a facilities' individual size, scope and nature of X-ray service as it relates to their training needs.

#### X-ray of pediatrics should require additional training:

The length and type of training does not adequately prepare limited diagnostic operators for taking X-rays of children.

**Response:** The Department recognizes that pediatrics present some unique considerations and application in the performance of X-ray procedures. As part of the training required by the Department in addition to the 80 hours of didactic training, the Department intends to include a section on pediatrics. There were varying opinions by individuals as to the need for special pediatric training; however, the Department does recognize the increased radio-sensitivity of children and therefore feels additional training is appropriate.

The best way to regulate the training of individuals taking X-rays in the Healing Arts is through the establishment of a Board and a certification process:

**Response:** The Department does not disagree with this concept. Legislation was introduced during the last two Legislative Sessions to establish a Board for that purpose. The Department testified in support of both bills. Neither bill passed. The Department

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encourages those groups or individuals who feel it is necessary to establish a Professional Certification Board to continue to pursue the Legislative process for that purpose. Establishment of a Board would relieve the Department of its responsibilities for developing and enforcing training requirements and assigning resources to ensure all individuals meet current training requirements. However, given the present situation, the Department believes its current responsibilities for ensuring the safe and beneficial use of ionizing radiation along with its role of protecting public health warrants having a comprehensive training requirement in the absence of a Board for that purpose.

# The rule contains a grandfather clause and the Department has testified in opposition to a grandfather clause in past Legislative action.

**Response:** The referenced grandfather clause that the Department was opposed to in previous legislation, was an open-ended grandfather clause. It proposed giving blanket approval to anyone currently taking X-rays and did not propose any training or education criteria for these individuals to meet. The grandfather clause being proposed in this rule has a time specific clause to allow individuals who have been taking X-rays prior to the effective date of the rule and have not completed adequate training as outlined in the new rule, to complete established training criteria while being allowed to continue taking X-rays. The grandfather clause proposed in the rule ensures that after a three year implementation period, all individuals taking X-rays in the healing arts will meet a minimum training standard. The Department does not believe that the grandfathering provision in the Legislation to which it was opposed previously contained similar requirements.

In discussions with District IV Learning Center in Montana approximately 25% of their student population is from people taking X-rays in North Dakota. Therefore, many individuals who are currently taking X-rays will meet most of the grandfather provisions being proposed. The only additional training they will need in the next three years is the three-hour self study portion. This self study portion covers the current regulatory requirements and X-rays involving pediatrics.

#### Intravenous Pylegram (IVP)

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One hospital administrator indicated there may be a need for several hospitals, not employing registered technologists, to have the ability to do IVP procedures.

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The IVP procedure is a kidney function test which Response: involves injecting a contrast agent into the patient followed by a series of X-rays. Ten to twelve abdominal and pelvic images are generally necessary. Each image adds approximately 350 millirem of Positioning and exposure radiation exposure to the patient. technique are critical to a successful procedure.

The necessity and appropriateness of adding IVP as an allowable practice in Appendix I was discussed during the committee meetings as well as with several individuals including radiologists and registered X-ray technologists. It was determined that the need for IVP procedures would be limited to only a few hospitals who do not already regularly employ general diagnostic X-ray operators. It was also determined that the training and competency requirements necessary for an individual to safely perform the Xray portion of an IVP are not adequately covered in the proposed regulation's training requirements.

If a facility determined it had a need to use limited diagnostic operators to perform IVP on a regular basis, the special provisions included in the rule would be the appropriate method to obtain approval for that purpose. Under these provisions, a facility can provide specialized training for their staff and apply to the Department for approval for a limited scope operator to do the procedure. The Department felt it was inappropriate to add the IVP procedure as an acceptable practice under all circumstances in the rule as currently proposed.

#### Develop In-State Training Availability:

The commentor requested that the Department work with universities and other training providers to make limited diagnostic training available in the state. The commentor further suggested that flexibility in implementing and enforcing these rules be exercised until such time as an in-state training program is available.

Response: One of the considerations in developing the rule was availability of training. Currently one option for obtaining the training is through correspondence followed by attending two fourday weekend sessions (Friday, Saturday, Sunday, Monday) in Billings, Montana. These courses are conducted three times per year.

The Montana course is conducted by an independent provider, the District VI Learning Center. The District VI Learning Center has expressed interest in conducting training classes in North Dakota on a regular basis. The Department will also encourage training institutions both within and outside of North Dakota to develop and conduct a training program in the State. The University of North



Dakota's Environmental Training Institute is one in-state institution currently evaluating their ability to conduct this training.

The implementation period for this regulation is written into the rule itself. The time allowed for individuals to obtain training is considered adequate. The Department does not believe it is necessary to grant additional exemptions from the training requirements if an in-state training program does not become available.

#### Annual Reporting:

The commentor expressed concern that the regulation be enforced equally and uniformly on all persons and in all settings bound by these requirements. The commentor asked the Department to develop an annual report summarizing its findings in regard to the operator training and competence requirement for specific provider designations.

**Response:** The Department believes this is unnecessary and burdensome. The X-ray operator training requirement is one of many requirements in the regulation which the Department enforces. The Department's current practice does not discriminate on other requirements contained within the regulation based on provider designation. The Department does not believe it is necessary to single out the X-ray operator training requirement as a special requirement within the rule which is in need of enforcement auditing.

#### Advisory Committee:

The commentor recommended the Department utilize an advisory committee for development of any additional training requirements for limited diagnostic X-ray operators.

**Response:** While a formal advisory committee for development of the North Dakota Radiological Health Rules is not mandated by the North Dakota Century Code, the Department did utilize an ad hoc committee of interested parties to develop the current proposed training requirements. This proved to be a very effective tool and the Department will assemble and utilize this type of committee in the future if the scope of the proposed changes warrant such a committee.

#### Exclusion of Dentists and Veterinarians:

Several individuals questioned why dentists and veterinarians were not included in the X-ray operator training requirements. More specifically they felt that the practice of podiatry is conducted



in a nature similar to the private practice of dentists and veterinarians and should therefore be excluded as well.

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**Response:** Several written responses to this comment are contained in Appendix A. The exclusion for veterimarians and dentists is not based on the size of practice. The new X-ray operator training requirements were designed for the purpose of protecting human patients from unnecessary, nonbeneficial radiation. Since veterimarians do not give X-rays to people they are not included in the regulation change.

The North Dakota Board of Dental Examiners has established requirements for dental personnel who may take X-rays. The Board has outlined the necessary training to ensure that dental personnel are adequately trained and competent to operate X-ray machines safely in the practice of dentistry. The Department has reviewed those requirements and concurs with the Board. Since the Dental Board has already established adequate training requirements, the Department does not believe additional requirements are necessary in this rule.

#### Undermining the Need for Registered Technologist Schools:

Several individuals were concerned that by providing a training requirement for limited diagnostic operators and by providing such a broad allowable scope of procedures, the regulation would undermine the need or desire for individuals to attend a two-year registered technologist training and accreditation program.

**Response:** Based on conversations with individuals associated with the X-ray profession, it is believed there are a substantial number of special procedures reserved exclusively for those with training and qualifications comparable to the registration requirements of the American Registry of Radiologic Technologists (ARRT).

Since the prerequisite requirements are generally limited to professions which require two years of training and experience, the prerequisite requirement will also help prevent individuals, who intend to seek a profession in the X-ray discipline, from beginning that profession by only attending the 83 hours of training. Limited scope X-ray operators will likely be individuals who already have a career in some other area of the medical field and wish to expand their abilities by becoming a limited scope X-ray operator.

Most of the facilities which now employ registered technologists are generally the larger facilities who participate in the Joint Commission of Accredited Healthcare Organizations (JCAHO). As part of the JCAHO accreditation, these larger facilities commit to using



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registered technologists for taking their X-rays. The JCAHO accreditation provision provides an incentive for individuals to seek registration in the X-ray profession. Finally, many non-JCAHO facilities also currently employ registered technologists to ensure quality and competency in their X-ray department. It is not anticipated that these regulations will change the action of those facilities who currently elect to voluntarily hire registered technologists.

#### Insufficient Training:

Several individuals felt the length of training for limited diagnostic X-ray operators was insufficient to adequately instruct individuals commensurate with the scope of procedures allowed in Appendix I.

**Response:** The Department recognizes the training and experience requirements for limited diagnostic operators could be more involved. However, the proposed training and competency costs to facilities will already be significant. Any additional cost must be weighed against the additional benefit of requiring even more training. The Department and the committee felt that since the Montana course was readily available and used in an adjoining state it should be considered as an adequate baseline for a didactic training requirement. In addition, the Department has added clinical performance competency requirements and three additional hours of training to supplement the Montana training program. Finally, as discussed earlier, the prerequisite requirement adds yet another level of competency and training.

While additional training and competency requirements would certainly increase the proficiency level of limited diagnostic Xray operators, the Department feels the requirement in the proposed rule is an acceptable compromise and provides a clear, consistent, evaluatable requirement which will improve limited diagnostic X-ray operator proficiency thereby increasing the quality of patient care and reducing radiation risk in North Dakota.



# PROPOSED CHANGES TO NDAC 33-10-06-03.1.a.(2)

#### Training Requirements For X-ray Operators

- (2) <u>All</u> individuals who will be, except those listed in part 1 of <u>Appendix G, prior to</u> operating the X-ray systems, shall be adequately instructed in the safe operating procedures and be competent in the safe use of the equipment commensurate with the size, scope, and nature of the service <del>As a minimum, individuals shall be instructed in and demonstrate competence in subjects as</del> outlined in Appendix F of this chapter. In addition, all individuals shall meet the specific requirements as outlined in subparagraphs (a) or (b) of this paragraph. The Department may use interview, observation or testing or both, to determine compliance. Records must be maintained by the registrant to demonstrate compliance with this paragraph.
  - (a) General diagnostic operators are not limited in scope of practice. Obtaining general diagnostic operator status will consist of one of the following:
    - <u>[1]</u> Obtain board eligibility or board certification with the American Registry of Radiologic Technologists (ARRT), or
    - [2] Obtain board eligibility or board certification with the American Chiropractic Registry of Radiologic Technologists (ACRRT) and only perform X-ray examinations for chiropractic services, or
    - [3] Receive Department approval, through individual consideration, by demonstration of an acceptable level of education and clinical training, or
    - [4] Demonstrate current enrollment in an educational program accredited by a process acceptable to the Department, and provide documentation of competency in all routine radiographic procedures and specialty views.
  - (b) Limited diagnostic operators are limited in scope of practice to only those procedures listed in Appendix I, except as allowed in subparagraph (c) of this paragraph. Limited diagnostic operators must meet the prerequisite qualifications, receive training, and demonstrate competence as follows:
    - [1] Limited diagnostic operators shall have successfully completed the course of training

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required by one of the Allied Health Professions listed in part 2 of Appendix G, and er.

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- [2] Complete at least 80 hours of didactic instruction at a single training program providing didactic instruction in accordance with part 1 of Appendix H, and
- [3] Complete the three-hour self-study course designed by the State Health Department, and
- [4] Complete the clinical experience requirements in part 2 of Appendix H.
- (c) Limited diagnostic operators may only conduct diagnostic X-ray examinations outside the scope of practice of Appendix I in accordance with the following:
  - [1] When it is determined to be an emergency and ordered by individuals listed in part 3 of Appendix G. The individual requesting the procedures must comply with subitems [a], [b] and [c] of this item.
    - [a] The requesting individual must provide a written order specifying what type(s) of diagnostic X-ray examinations outside the scope of procedures listed in Appendix I are requested. The order shall contain an explanation of the emergency nature or medical reason for the order.
    - [b] The requesting individual must provide direct supervision during the time the X-ray image is obtained.
    - [c] The facility must keep records of all emergency x-ray procedures ordered under this subparagraph.
  - [2] When a practice requires a specific view or exam outside the scope of practice listed in Appendix I to be conducted on a routine basis, and the facility has only limited diagnostic operators, application may be made to the Department requesting approval for a limited diagnostic operator to perform the procedure. This allowance shall be limited to the facility, the specific individual, and the procedure requested. After an allowance has been granted, re-application and reauthorization is not necessary for the same

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procedure. The application for allowance should include the following:

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- [a] Documentation which demonstrates the need for the specific view, and
- [b] Documentation on forms supplied by the Department indicating that each individual for which the request is made has demonstrated competence in the procedure, and
- [c] Proof of additional didactic instruction or completion of examination as deemed necessary by the Department for each individual.
- (d) Limited diagnostic operator implementation period.
  - [1] Individuals who begin taking X-rays after one year from the effective date of this regulation will have to meet all of the requirements of this paragraph before operating the X-ray system.
  - [2] Individuals who have completed the training and experience requirements in effect prior to the effective date of this regulation and have been actively working as an X-ray operator for six months, but less than two years, prior to the effective date of this regulation.
    - [a] are exempt from the requirements of items [1] and [4] of subparagraph (b) and
    - [b] must complete the 83 hours of didactic training in items [2] and [3] of subparagraph (b) within three years from the effective date of this regulation. Individuals who have previously completed 80 or more hours of acceptable training will not need to retake the 80-hour training, but, within the three years, must still take the 3-hour self study course designed by the State Health Department.
  - [3] Individuals who have completed the training and experience requirements in effect prior to the effective date of this regulation and have been actively working as an X-ray operator for more than two years prior to the effective date of this regulation, are exempt from the requirements of items [1] and [4] of subparagraph (b) and:



[a] Must complete the requirements of subitem [2][b] of subparagraph (d), or AND BEING

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- [b] Demonstrate that they have completed at least 80 hours of instruction related to X-ray operations at various training programs and complete the three-hour self study course designed by the State Health Department and demonstrate competence in accordance with appendix K within six months of the effective date of this regulation.
- [4] Individuals who have not been taking X-rays within the six months prior to the effective date of this rule and begin to take X-rays within one year after the effective date of this rule will have to meet the prerequisite qualifications of Appendix G. Part 2 and will have until one year after they begin taking X-rays to complete the training requirements of this paragraph. During this one year period, the individuals should comply with the facilities X-ray operator training requirements in place prior to the effective date of this rule.

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#### APPENDIX F

# DETERMINATION OF COMPETENCE GENERAL TRAINING REQUIREMENTS FOR ALL X-RAY OPERATORS

The Department may use interview, observation and/or testing to determine compliance. The following are areas in which an individual shall have expertise for the competent operation of X-ray equipment:

- 1. Fundamentals of radiation safety.
  - a. Characteristics of X-radiation.
  - b. Units of radiation dose (mrem).
  - c. Hazards of exposure to radiation.
  - d. Levels of radiation from sources of radiation.
  - e. Methods of controlling radiation dose.
    - (1) Working time.
    - (2) Working distance.
    - (3) Shielding.
    - (4) Collimation.
    - (5) Filtration.
    - (6) Gonad shielding and other patient protection devices.
    - (7) Restriction of X-ray beam to the image receptor.
    - (8) Grid utilization.
    - (9) Utilization of mechanical immobilization device.
- 2. Familiarization with equipment.
  - a. Identification of controls.
  - b. Function of each control.
  - c. How to use a technique chart.
- 3. Film processing.

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- a. Film speed as related to patient exposure.
- b. Film processing parameters.
- c. Quality assurance program.
- 4. Emergency procedures.
  - a. Termination of exposure in event of automatic timing device failure.
- 5. Proper use of personnel dosimetry.
  - a. Location of dosimeter.

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b. Interpretation of personnel monitoring reports.

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Anatomy and positioning.

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- a. Relevant human anatomy.
- b. Relevant human physiology.
- c. Radiographic positioning.
- 7. The requirements of pertinent federal and state rules.
- 8. The licensee's or registrant's written operating and emergency procedures.

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### APPENDIX G

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The following are individuals that qualify for training exemptions, approved Allied Health professions which qualify for cross-training into diagnostic X-ray as a limited diagnostic operator and individuals who may order diagnostic X-rays to be taken by a limited diagnostic operator outside the scope of procedures in Appendix I:

- 1. Individuals exempt from minimum training requirements in subparagraph b of paragraph 2 of subdivision a of subsection 1 of section 33-10-06-03.
  - a. Medical doctors
  - b. <u>Chiropractors</u>
  - c. Doctors of Osteopathy
  - <u>d.</u> <u>Podiatrists</u>

- 2. Prerequisite Oualification: Individuals who qualify for cross-training as a limited diagnostic operator.
  - a. Nurse Practitioner, Registered Nurse, Licensed Practical Nurse
  - b. Emergency Medical Technician Paramedic
  - c. Physical Therapist, Physical Therapy Assistant
  - d. Occupational Therapist, Occupational Therapy Assistant
  - e. <u>Medical Technologist</u>, <u>Medical Lab Technician</u>, <u>Clinical</u> <u>Lab Technician</u>
  - f. Physician Assistant
  - q. Orthopedic Physician Assistant
- 3. Individuals who may order emergency X-ray examinations outside the scope of procedures in Appendix I to be taken by limited diagnostic operators:
  - a. Medical Doctor
  - b. Doctor of Osteopathy
  - c. Physician Assistant
  - d. Nurse Practitioner
  - e. <u>Chiropractor</u>



# APPENDIX H

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# Limited Diagnostic Operator Training Requirements

Students must meet the prerequisite requirements of item 1 of subparagraph b of paragraph 2 of subdivision a of Subsection 1 of Section 33-10-06-03 and complete the training requirements of this appendix.

Training requirements have been divided into 2 sections, didactic instruction and clinical experience/supervision. Upon completion of didactic training, the individual must complete the clinical experience requirements of either part a or part b of section 2 of this appendix and demonstrate competence for examinations listed in Appendix I. Records must be maintained to demonstrate compliance with these requirements.

- Didactic instruction section: Individuals shall complete a 1. minimum of 80 hours of didactic training at a single course providing the minimum hours of instruction in the subjects below. Correspondence course work cannot exceed 20 percent of the 80-hour course (16 hours maximum), The course content should approximate the outline below. The 80-hour course is subject to Department approval. Individuals must also complete the 3-hour self study course designed by the State Health Department. An examination is required to demonstrate successful completion of a course.
  - Basic X-ray Physics 12 hrs. a
    - general description of production of X-rays
    - function of filtration and effects it has on X-ray \_ beam
    - collimation\_ -----
    - types and function of beam limiting devices
    - design, features and function of X-ray tube 1 hr.
  - Radiobiology <u>b</u>.
    - effects of ionizing radiation to the human body
    - factors that cause somatic and genetic damage
  - Radiation Protection 6 hrs. <u>c.</u>
    - ALARA concept Ξ
    - shielding materials <u>...</u>
    - radiation quantity and units of measurement -
    - basic interactions of X-ray with matter <u>-</u>
    - primary and secondary scatter \_
    - importance of time, distance, shielding -
    - maximum permissible dose-occupational/public .... ست
    - latency period ----

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- patient protection
- 15 hrs. Principles of Exposure
- factors that control and influence radiographic quality

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- properties of X-rays ĩ
- size distortion caused by geometric parameters ĩ

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- parameters which cause shape distortion
- technique factor selection
- 15% rule, mAs and kVp relationship Ξ
- grid-types, ratios, and how they affect image quality
- intensifying screens Ξ
- X-ray film -
- artifacts
- inverse square law
- Darkroom Procedure and Processing 4 hrs. <u>e.</u>
  - film storage and handling -
  - film processing and troubleshooting -
  - design, features and function of a processor •••
  - silver recovery \_
  - quality assurance/quality control
- <u>f.</u> Anatomy and Positioning

1.	Chest	4 hrs.
2.	Abdomen	4 hrs.
3.	Extremity	<u>8 hrs.</u>
4.	Spine	8 hrs.
5.	Skull	8 hrs.

- Clinical experience/supervision section. Individuals must 2. complete either a or b below. If the individual is unable to demonstrate clinical competence in a procedure due to a lack of opportunity, the student shall complete the three prerequisite examinations required by Appendix J using simulation for items 1) a through k of Appendix J. Final demonstration of competence in items 1) a through s of Appendix J should be completed as soon as there is a patient requiring the procedure. No individual may perform an unsupervised procedure for which they have not successfully completed the final demonstration of competence.
  - <u>a.</u> The individual must complete 3 months of clinical training during which time they may perform X-ray examinations only under direct supervision.
    - (1) Direct supervision and evaluation of competence shall be performed by a general diagnostic operator or a limited diagnostic operator with 2 years experience.
    - (2) The individual shall utilize proper procedure as indicated in Appendix J.
    - (3) The individual shall be evaluated on procedure, performance and competency on forms provided by the



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Department for each of the examinations listed in Appendix I.

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b. Individuals must complete at least 120 hours of clinical training at a facility where there is routinely 50 or more limited diagnostic X-ray examinations performed per week. During this time they may perform X-ray examinations only under direct supervision. After completing the 120 hours of training, the individual must complete an additional three month probationary training period as outlined in number 4 of this part.

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- (1) Direct supervision and evaluation of competence shall be performed by a general diagnostic operator or a limited diagnostic operator with 2 years experience.
- (2) The individual shall utilize proper procedure as indicated in Appendix J.
- (3) The individual shall be evaluated on procedure performance and competency on forms provided by the Department for each of the examinations listed in Appendix I.
- (4) Upon completion of 120 clinical hours and demonstration of competence in accordance with Appendix J for limited diagnostic operator examinations:
  - (a) Individuals must complete a 3 month probationary training period during which time they may independently perform limited diagnostic operator examinations for the procedures which they have successfully demonstrated competence.
  - (b) During the 3 month probationary training, a general diagnostic operator, or a limited diagnostic operator with two years experience, or a radiologist must evaluate all films and conduct at least 6 hours of direct supervision on a weekly basis and give feedback on any needed improvements.
    - [1] All films, including repeat and waste films, must be kept for evaluation.

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[2] Evaluation must be done on forms supplied by the Department.



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# APPENDIX I

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Specific examinations that are allowed in the scope of practice for limited diagnostic operators.

Chest: PA, lateral, decubitus	
Ribs: AP, PA, obliques	
Abdomen: KUB, upright abdomen	
Hand & fingers: PA, lateral, oblique	
Wrist: PA, lateral, oblique	
Forearm: <u>AP, lateral</u>	
<u>Elbow:</u> <u>AP, lateral</u>	
<u>Humerus:</u> <u>AP, lateral</u>	
Shoulder: AP internal & external r	otation
Clavicle: AP, AP axial	
Pelvis: AP	
Hips: AP, Frog leg lateral, cr	<u>oss-table lateral</u>
Femur: AP. lateral	
Knee: <u>AP, lateral</u>	
<u>Tibia-Fibula:</u> <u>AP. lateral</u>	
Ankle: AP, lateral, obliques	
Foot & toes: AP, lateral, obliques	
<u>Sinuses:</u> <u>Water's, lateral</u>	
Skull: AP/PA, lateral	
Facial bones: PA, lateral	
<u>C-spine:</u> <u>AP, lateral, odontoid (ne</u>	ot trauma),
swimmer's (not trauma)	
T-spine: AP. lateral, swimmer's ()	not trauma)
L-spine: AP, lateral, L5-S1 latera	

Any situation deemed an emergency and requiring a limited diagnostic operator to conduct procedures not specifically listed above, requires a written order from an individual listed in Part 3 of Appendix G and direct supervision from the individual ordering the examination in accordance with item 1 of subparagraph c of paragraph 2 of subdivision a of subsection 1 of section 33-10-06-03.



### APPENDIX J

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#### X-ray Procedure and Image Competency Criteria

An individual must perform at least three examinations prior to requesting a final competency evaluation for each of the limited scope examinations listed in Appendix I. The three preevaluation examinations should be on actual patients but may be simulated if there is an insufficient number of patients requiring the procedure during the students clinical competency training period. The evaluations shall be documented on forms provided by the Department. The final competency evaluation must be on an actual patient. To pass a final competency evaluation, the individual must receive an acceptable rating in each of the criteria listed below.

- 1. At a minimum, the following criteria must be evaluated during a procedure and image competency evaluation involving an actual patient. Simulated procedures need to evaluate only Items A. through K. below:
  - a. <u>Select appropriate film size</u>
  - b. Select appropriate technique
  - c. <u>Use correct source-to-image distance</u>
  - d. Establish proper direction of central ray
  - e. Execute proper patient position
  - f. Collimate if appropriate
  - <u>q.</u> Provide gonadal shielding if appropriate
  - h. Use correct film markers
  - <u>i.</u> <u>Give proper patient instruction</u>
  - i. Place patient information correctly on the film
  - k. Complete examination in an acceptable time limit
  - 1. All anatomical parts included on the film
  - m. Correct positioning of anatomical parts
  - n. Appropriate contrast
  - o. Adequate density
  - p. Correct use of right and left markers
  - a. Proper accessory markers as needed
  - r. No visible motion
  - s. Patient information correct and clearly visible

If the individual is unable to demonstrate clinical competence while completing the requirements for clinical supervision in either 2.a. or 2.b. of Appendix H due to a lack of opportunities to conduct certain procedures, the student shall complete the three prerequisite examinations using simulation for items 1) a. through k. Final demonstration of competence in items 1) a. through s. should be completed as soon as there is a patient requiring the procedure. No individual may perform an unsupervised procedure for

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#### APPENDIX K

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#### Training exemption and demonstration of competence for individuals with greater than two years experience

After six months from the effective date of this regulation, limited diagnostic operators meeting the requirements of this regulation in accordance with this appendix may only perform procedures in the examination(s) in which they have successfully demonstrated competence. Prior examinations are not necessary for demonstrating competence in accordance with this appendix.

1. Training exemption

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Individuals who have completed two years of experience prior to the effective date of this regulation and have not attended an 80-hour didactic training program as identified in item 2 of subparagraph b of paragraph 2 of subdivision a of subsection 1 of section 33-10-06-03 are exempt from completing the 80-hour didactic training if they can demonstrate they have completed at least 80 hours of relevant X-ray training regardless of the length of the individual training session prior to the effective date of this regulation, and

- 2. Demonstrate competence in accordance with this appendix as follows:
  - a. <u>competence shall be determined by a general diagnostic</u> <u>operator on forms provided by the Department, and</u>
  - b. competence shall include successful demonstration of Items 1 a through s of Appendix J for all procedures listed in Appendix I.



#### HOUSE HUMAN SERVICES COMMITTEE REPRESENTATIVE CLARA SUE PRICE, CHAIRMAN

#### TESTIMONY BY REPRESENTATIVE TODD PORTER

#### **IN SUPPORT OF SB 2272**

Chairman Price and members of the House Human Services Committee, for the record my name is Todd Porter, Representative from District 34 in Mandan. I stand before you in favor of SB 2272.

Over the last few sessions the House and Senate held a hearings on bills that would have created a licensing board to oversee lisensure and educational requirements of individuals performing X-rays in the State of North Dakota.

The Health Department has been working with groups to establish some guidelines to oversee individuals taking X-rays in clinics and hospitals. Two years later the process is still not in place by the department to oversee this process. The Health Council in January just approved the proposed rules from the department.

Missing in my mind were two very important componer (at

1. Continuing Education. Most every profession, including hospital administrators, physicians, lab technicians, and EMT's are required to perform some type of continuing education. When I presented this to the department they stated that "continuing education should be a requirement for limited diagnostic operators. However the department does not believe it has the resources to develop and implement a continuing education requirement"

I wonder why the department was so intent on establishing minimum educational requirements to perform an X-ray and was not interested in the ongoing continuing educational requirement of many other professions. What does that message say to the public that entrust a department to assure patient safety.

The department does not have the authority to certify the individual, only the machine. This leaves an area of concern as it relates to individual's ability to perform an exam. The department doesn't have the authority to charge for individual certification and doesn't intend to ask for the authority. Without the oversight of the individual the unknowing public will continue to assume Page 2



that they are receiving a quality examination ordered by their physician. We need to make sure that the individual is also certified and with that certification comes the requirement of ongoing education.

Currently the Division of Emergency Health Services certifies individuals in 4 separate areas of expertise. Each of these areas require ongoing education as a requirement to retain certification. This agency works with an association to utilize their education components without the redundancy of spelling out the requirement, but also the record keeping and tracking requirements. My certification as a Paramedic comes with no charge from the department.

2. Pediatric examinations. It was suggested during the rule making process that requirements be drafted to include special education in the area of pediatric examinations and limited degrees of examinations of pediatric patients. A chest x-ray on a pediatric patient is certainly a different procedure than a chest x-ray on an adult patient. I think that the unknowing public deserves this education component. The department in their letter explains that they intend to include a section of pediatrics, but the next review and rules will be 3 to 5 years away.

I ask that you consider your self or your family being subjected to a medical procedure by someone not trained in that procedure or worse yet, someone that was trained 20 years ago on the job and has never kept current with technology through ongoing education. We need to ensure that we have an informed and protected consumer of health care.

Thank you.



March 10, 2003

Madam Chairman and members of the House Human Services Committee, my name is Amy Hofmann. I represent the North Dakota Society of Radiologic Technologists, (NDSRT) a professional association of Registered Radiologic Technologists, currently serving as the Government Relations Committee Chair. I have a Bachelor Degree in Radiologic Technology from Minot State University and a Masters in Management from the University of Mary. I have been employed in the Radiologic Technology sciences in the state of North Dakota for 15 years.

During the last two legislative sessions, we, NDSRT, sought a licensure bill that would require all x-ray operators to be registered with the State. North Dakota is one of 15 states that has no licensure or registration of x-ray operators, meaning that anyone can be hired to operate x-ray equipment, and expose public members to ionizing radiation for the purpose of taking medical x-ray images or treating with radiation for cancer therapy.

The two bills failed in the legislature with the reasoning that the State Health Department was addressing the issue with rule change to NDAC 33-10-06. As it currently stands, the Health Department received approval from the Health Council to adopt the rule changes. They are now in affect as of March 1, 2003. The rule change refers to two levels of x-ray operators; General and Limited. A General x-ray operator is a full scope radiologic technologist who has completed a 24 mouth program of approximately 4,100 hours of education and training in the radiologic sciences, has passed a national exam and there by, credentialed by the American Registry of Radiologic Technology (ARRT). A Limited x-ray operator is an individual who has not completed formal training in an accredited program and has not passed the national



registry test of ARRT. In the new rule change of the State Health Department, Limited x-ray operators are now required to complete 83 hours of specific education and training in performing a limited scope of x-ray procedures and must proved competency to continue performing x-ray imaging. They are to complete this training within three years.

Speaking on behalf of the NDSRT, we as professionals support and appreciate the State Health Department's work on the rule change of NDAC 33-10-06.1.a as it pertains to the education, training and competency determination of limited x-ray operators. We feel the process followed for rule change was effective but wish to see additional requirements of limited x-ray operators:

- Continued education after the three year period of initial education and training
- detailed, indepth training and competency demonstrated in performing pediatric radiologic imaging procedures.

The intent of this bill is to require limited x-ray operators to complete and document appropriate and applicable continuing education to the State Health Department. We as professionals in the radiologic health sciences in the state of North Dakota, feel strongly that an x-ray operator, particularly a non credentialed x-ray operator, be required to complete appropriate continuing education to keep skills and knowledge base current and effective in the limited scope of their practice.

Pediatric training and skill level is also very significant. They present unique physiologic and medical needs as patients and we believe that a well defined education and training course is in order for the limited x-ray operator to be competent in imaging



the pediatric patient in a safe manner and achieve a high quality x-ray without repeat exposure to the infant.

Thank you for your time and attention to this very significant patient care issue. Our objective as radiologic technologists is to be actively involved in the processes that will ensure the patients of North Dakota, regardless of where they might be receiving their x-ray imaging services, get the safest and highest quality of service possible.

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175 ~~ Operator's Signature

#### March 10, 2003

Madam Chairman and members of the House Human Services committee, my name is Shirley Porter. I represent the North Dakota Society of Radiologic Technologists (NDSRT), a professional organization founded for the express purpose of enhancing the proper and safe delivery of medical radiological services through education.

I am a Registered Radiologic Technologist; I hold my registry with the American Registry of Radiologic Technologists (ARRT) a nationally accredited organization. My background is a Bachelor of Science degree from Minot State University in the Radiologic Sciences this also includes a 24-month accredited program school of Radiologic Technology. I am also required to obtain 24 Continuing Education credits in a two-year period as part of my registry requirement. As a professional I realize I chose this path for my safety and also the safety of my patients.

But North Dakota is not a Licensure state, which means that absolutely anyone in the state can perform x-ray exams of any kind with a physician's order. And that is exactly what is taking place, anyone and everyone is taking an x-ray from the receptionist at the front desk, the lab personnel, and the nurse and in some institutions it is the janitorial staff or the housekeeping staff. Many of these individuals are doing so with little to no training. This bill has been introduced to compliment the new Health Rules and Regulations that will go into effect later this year. We are very concerned that pediatric training and continuing education were not included at that time.

Pediatric Radiology is an art, which is acquired only through education and practicing of skills. There are numerous exposure factors that can be altered to accommodate an anxious child that may not understand why they must hold still, hold their breath or alleviate the fear that this will not hurt. Newborns and infants are an entirely different world when it comes to performing an x-ray.



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Knowing how to alter the manual and automatic exposure factors is a start but not enough when radiographing children; one must also understand why they must shield the reproductive organs with a lead shield and also the importance of shielding the retinas of newborns. Education is paramount for a quality radiograph to be produced. Even the State Health Department recognizes the importance of this need for additional training. According to a statement that was included in their response to comments received on the proposed changes to the North Dakota Radiological Health Rules 2002 dated from August 15, 2002, quote "the Department does recognize the increased radio-sensitivity of children and therefore feels additional training is appropriate". The route the department chose for pediatric education is to be included in the three hour self study portion according to the same document that was mentioned above. Hopefully this will be addressed now and not just mentioned in passing. Another appropriate area I believe would be beneficial is in the clinical competency portion; there is no substitute for hands-on experience when dealing with children.

Continuing education: Who among us is so brave as to say that there is nothing new for them to learn. There are continuing education requirements for virtually every healthcare professional from doctors, to pharmacists, to teachers, to physical therapists, to respiratory therapists, to medical lab technicians, and medical technologists; also included is the registered radiologic technologist. I firmly believe it is even more important for the unregistered individual with no formal training to have the opportunity for continuing education simply due to the limited volume of exams and training they possess.

Continuing education provides a mechanism for individuals to fulfill their responsibilities to maintain competency and demonstrate accountability to peers, the public and other healthcare providers. The citizens of North Dakota deserve it but may not know to demand it.

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Accessibility of continuing education is not an issue what-so-ever for individuals in the state of North Dakota. It comes down to a matter of personal choice, do you prefer home studies and video tapes, lectures, seminars and workshops or direct readings and quizzes to mail in or do on-line, CD-ROMS, in-services and even college courses. The NDSRT provides an educational video library to rent from and also two one-day workshops along with a two-day state conference. There are also numerous companies that provide continuing education at a competitive price. The American Society of Radiologic Technologists (ASRT), of which the NDSRT is an affiliate, can provide all of your continuing education requirements, including approval, tracking, proof of participation, they even mail you a printout showing you the number of CE's you have on file. Other sources include the EduMed Corporation from Minnetonka, Minnesota, of which the NDSRT is also an affiliate, they provide video rental and home study course, the Radiologic Educational Services company offers home-study programs, Radiological Services offers a wide variety of booklets, tests and seminars. These are only a few sources at our disposal – so accessibility is not an issue.

The three-year, 2006 delay will give the Health department time to implement their current rule changes and also give time to setup the continuing education guidelines. As in the past the NDSRT would be more than happy to assist in any fashion as approved by its board of directors. The Adhoc committee would again be an excellent route to hammer out the specifics of continuing education for those unregistered individuals.

Once again I appreciate the hospitality of the House Human Services committee. Thank you all for your valuable time and commitment to the state of North Dakota.



#### **NDSRT Benefits**

- Continuing education -as an affiliate of the ASRT, the NDSRT is able to provide category "A" credit to its members. CE's are available for all disciplines and specialties of the radiological sciences.
- Educational Conference and Workshops held throughout the state and announced annually.
- District Meetings held monthly from September through May in each district. Districts may also hold educational opportunities.
- Video Library- Tapes of various topics encompassing all modalities are available for Ioan at a minimal cost to its members.
- Members are Nationally Certified R.T. (ARRT) American Registry of Radiologic Technology.
- **Develops Public Educational Information**
- Over 50 years supporting North Dakota Radiologic Technologists.

#### ND Schools of Radiologic Technologists

- Medcenter One School of Radiologic • Technology-Bismarck, ND
- Merit Care School of Radiologic Technology Fargo, ND
- Northwest Technical College East Grand • Forks, MN
- St. Alexius Schoel of Radiologic Technology - Bismarck, ND
- Trinity Hospital School of Radiologic Technology - Minot, ND

For more information regarding schools in ND or throughout the USA, Please log on to: www.ndsrt.org or www.asrt.org

North Dakota Society of Radiologic Technolog





**Radiologic Technologists** 

# NDSRT

## North Dakota Society of



### NDSRT

The North Dakota Society of Radiologic Technologists (NDSRT) is a membership society for all professionals in Radiologic Sciences. We, as an affiliate of the American Society of Radiologic Technologists (ASRT), work as advocates, together with others to promote quality patient care. We serve the needs of our members by providing education and the means of networking and communicating information. We are committed to our profession, the ethical values we embrace, and the continued professional development needed to uphold the quality of service we provide.

The NDSRT was founded in 1950, and is governed by the membership, and elected Board of Directors, and District Representatives. It is affiliated with the American Society of Radiologic Technologists (ASRT).

For additional information regarding the Radiologic Technologists, please log on to: <u>www.ndsrt.org</u> or <u>www.asrt.org</u>

#### Who are Radiologic Technologists!

Radiologic Technologists are the health care professionals who perform diagnostic imaging examination and administer radiation treatments. They are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection, and basic patient care. They may specialize in a specific imaging technique such as, <u>Bone Densitometry, Cardiovascular-interventional technology,</u> <u>Computed Tomography (CT), Mammography,</u> <u>Magnetic Resonance Imaging (MRI), Nuclear</u> <u>Medicine, Quality Management, Sonography or General Radiography.</u>

- The Radiographer uses radiation (x-rays) to produce black & white images of tissues, organs, bones and vessels of the body. These images are captured on film, computer or videotape and assist in the diagnosis of disease or injury.
- The Cardiovascular-Interventional Technologist uses sophisticated imaging techniques and radiation to produce images that aid in the diagnosis and / or treatment of vascular disease or other abnormalities such as coronary artery disease and angioplasty. These individuals may inject the patient with a material that assists in visualizing the images produced.
- The **Bone Densitometry Technologists** use a special type of x-ray equipment to measure bone mineral density at a specific anatomical site (usually the wrist, heel, spine or hip) or to calculate the total body bone mineral content. This helps to estimate the amount of bone loss and to estimate the risk of fractures.

- The **Sonographer** uses high frequency sound waves to produce images of internal structures that assist in the diagnosis of disease or injury and fetal development.
- The **Radiation Therapists** helps manage the radiation treatment of the patient with cancer and some benign conditions. This management includes daily treatment, patient support and treatment planning.
- The Mammographer uses radiation to produce images for screening or diagnostic procedures for detection of breast disease. These individuals also provide breast health education.
- The Nuclear Medicine Technologist administers radioactive materials (radiopharmaceuticals) to produce images for diagnosis of various disorders.
  Radiopharmaceuticals also may be used to treat diseases such as thyroid cancer.
- The Computed Tomography (CT) Technologists uses radiation and a computer to produce cross-sectionals images of the body. These individuals also may inject the patient with a material that assists in visualizing the images produced.
- The Magnetic Resonance (MRI) Technologists are specially trained to operate MR equipment that uses radiowaves, magnetic fields and a computer to produce detailed images of the patient's anatomy. This individual may inject the patient with a material that assists in visualizing the images produced.

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