Diagnostic Imaging in Alberta

Dr Bill Anderson, Edmonton
Zone Clinical Director

Mauro Chies, Vice President
Diagnostic Imaging Services

Diagnostic Imaging Structure

- **Divided into Local Operations. Divided into three zones with a "dyad" leadership model consisting of a Clinical Director and an Executive Director**

Clinical Support Services
Diagnostic Imaging Services

Alberta Health Services

Vice President
Diagnostic Imaging Services
Mauro Chies (1.0 FTE)

Administrative Assistant
Shenaz Jiwa (1.0 FTE)

Manager Projects
Amin Allibhoy (1.0 FTE)

Executive Director
Suburban/Rural
Peter Froese (1.0 FTE)

- **Zone Director North**
  Ted Nessman (1.0 FTE)
- **Zone Director Central**
  Kate Luchenski (1.0 FTE)
- **Zone Managers South**
  Donna Castelli (1.0 FTE)
  Pat Laevens (1.0 FTE)

Executive Director
Edmonton & Area
Lorena Cabral (1.0 FTE)

- **Director UAH/Stollery/ Mazankowski**
  Fred Kozin (1.0 FTE)
- **Director RAH, GRH, AHE, Eastwood**
  Barry Bowtell (1.0 FTE)
- **Director Community/ Urban/Rural**
  Joe Lopes (1.0 FTE)
- **Director Cancer Imaging Serv.**
  Don St Hilaire (1.0 FTE)

Executive Director
Calgary & Area
Carla McAuley-Gilmore (1.0 FTE)

- **Manager PLC**
  Mark MacMillan (1.0 FTE)
- **Manager RGH**
  Sandra Hovey (1.0 FTE)
- **Manager ACH**
  David Schmidt (1.0 FTE)
- **Manager FMC**
  Mike Carson (1.0 FTE)
- **Manager Rural DI**
  Colleen Hansen (1.0 FTE)
- **Manager Community DI**
  Deb Lausen (1.0 FTE)

Local Operations

Director
Equipment, & Informatics
Brian Van Skiver (1.0 FTE)

- **Manager Equipment and Informatics**
  Jack Berry (1.0 FTE)
- **Manager Equipment and Informatics**
  Brian de Haan (1.0 FTE)
- **Manager Equipment and Informatics**
  Lina Maidens (1.0 FTE)
- **Manager Performance Management**
  Stephanie Watson (1.0 FTE)

Director
Quality, Safety and Education & Alberta Radiation Protection Agency
Marlene Stodgell-O'Grady (1.0 FTE)

- **Quality, Accreditation & Safety** (function)
- **Education, Workforce Planning and Staff Development** (function)

Provincial Support Team

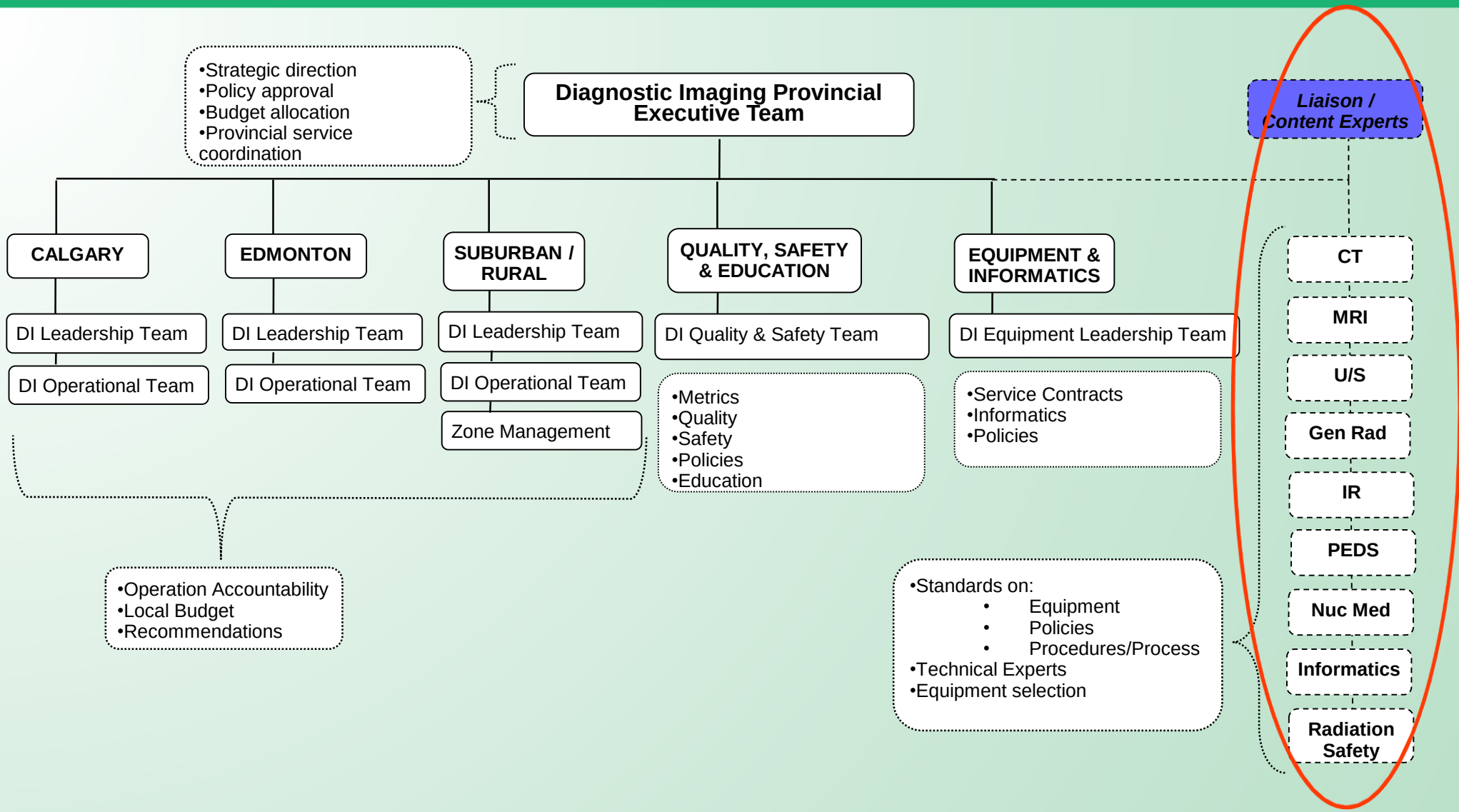
Diagnostic Imaging Governance

Diagnostic Imaging Provincial Executive Team (DIPET) is the strategy and decision body for DI in the Province reporting up to Andrew Will, EVP, Clinical Support Services.

Modality Liaison groups (ie MRI, CT etc) make up the content experts and knowledge transfer groups consisting of radiologists, technologists and managers reporting up to DIPET.

Diagnostic Imaging Governance

Alberta Health Services



DI Provincial Function

- **Diagnostic Support and consultation for Ultrasound, Gen Rad, Nuclear Medicine, CT, MRI, Interventional Radiology and Cardiac Catheterization for all AHS facilities (2.7 million exams annually)**
- **Approx 130 sites**
- **Community support through Community Providers**
- **Interventional Therapies and treatment (O.R. style services)**

Diagnostic Imaging Model in Alberta

- **Approximately a 50-50 activity split between community and hospital activity.**
- **Community imaging providers operate independently and are funded through the Schedule of Medical benefits (SOMB)**

Diagnostic Imaging Model in Alberta – cont'd

- CT and MRI are only funded through AHS global operations. SOMB does not cover MRI and CT in the community.
- Community providers can and do provide these services through Private Pay, WCB, industry and military.

Diagnostic Imaging at a glance

- **22 MRIs in the province. (includes 1 for cancer imaging, 1 mobile, 1 intra-operative and a 3 Tesla for clinical and research)**

MRI 90 day Access Working Group

- **Established in 2002/03**
- **Consisted of Radiologists, managers and representatives of physician practice and Alberta Health and Wellness**
- **Developed Prioritization guidelines to be utilized at target wait times and appropriateness.**
- **Agreed to and approved by local Medical Advisory Committees.**

MRI Prioritization Guidelines

MRI Outpatient Prioritization categories are as follows:

- Priority One (less than 7 days)
- Priority Two (less than 30 days)
- Priority Three (less than 90 days)
- Priority Four (scheduled exam follow-up as clinically necessary)

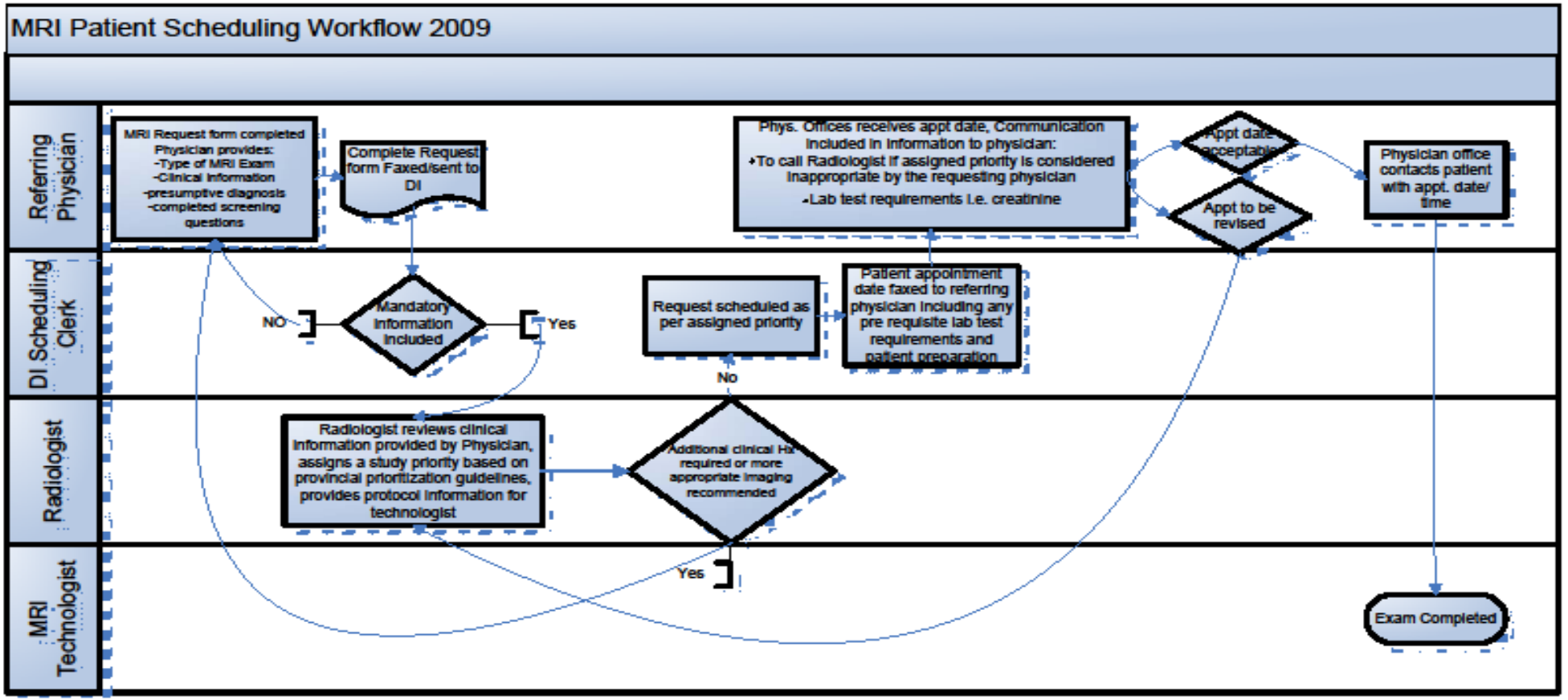
MRI Utilization in Alberta

MRI Utilization rates			
Zone	2009/10 MRI exams	Population	Utilization rate 2009/10 per 1000
North Zone	11,803	412,081	28.6
Central Zone	11,885	430,029	27.6
South Zone	12,380	271,305	45.6
Edmonton Zone	70,694	1,084,554	65.2
Calgary Zone	58,280	1,275,664	45.7
Provincial Total	**165,042**	**3,473,633**	**47.5**

Alberta Health Services

Diagnostic Imaging

MRI Patient Scheduling Workflow 2009



Future State (? Date Project Proposal)

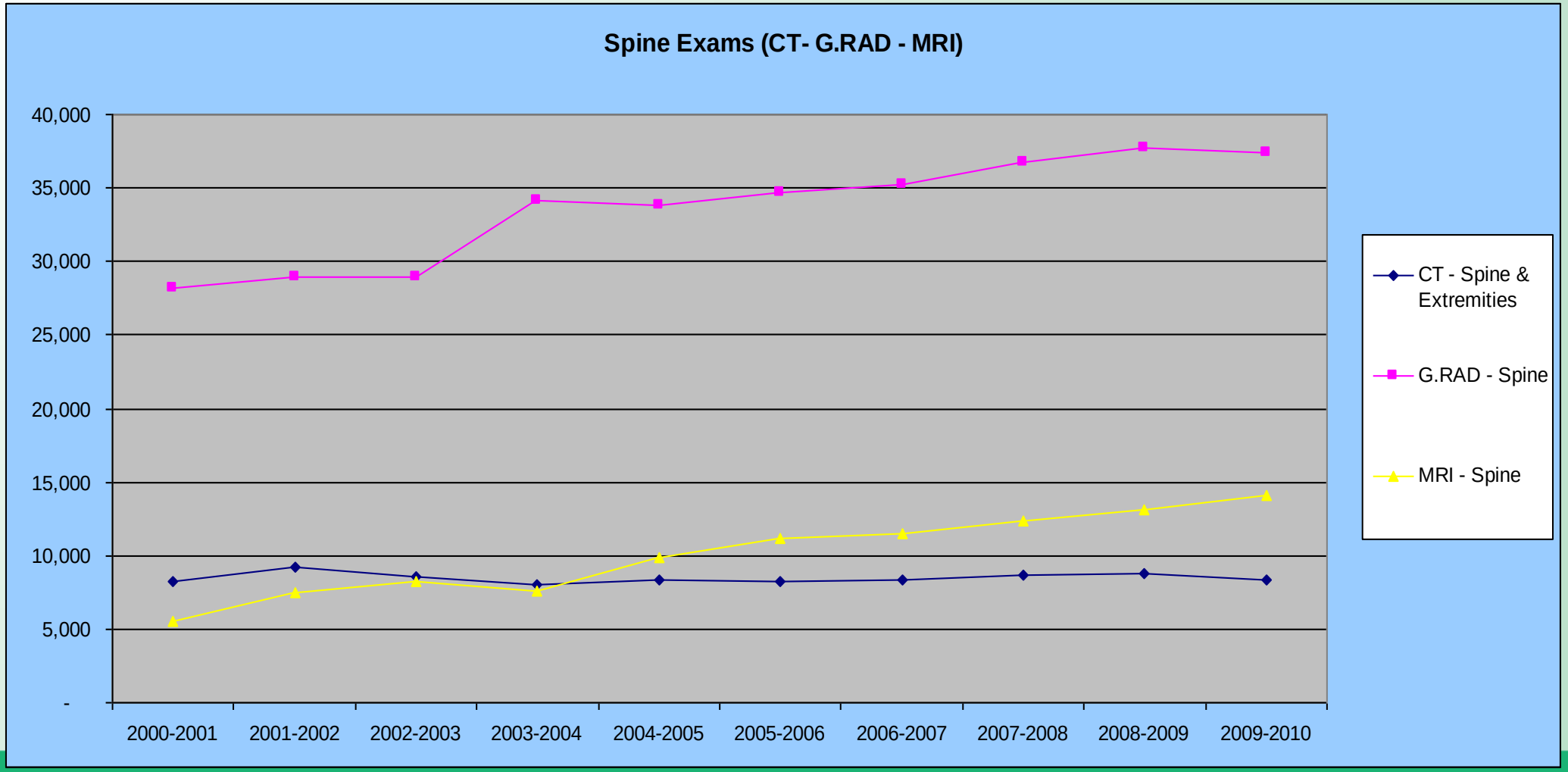
Physician requests MRI

EMR feeds specific information into a CPOE with CDS tools (CAR Appropriateness Criteria)

a) More appropriate exam or consultation is suggested, or request is denied as inappropriate, Physician may over ride

b) Through web based schedule exam is booked and appointment confirmed with Patient at the time (option to request alternate time)

Spine Exams AHS Edmonton



L-Spine Plain X-rays in Community

Clinic volume 50% of imaging

- **Typically higher % of plain images**

Top 10 "requestors"

- **6 Chiro, 1 Ortho, 3 FP**

Top 5

- **Chiro**
- **(45% of L-spine X-rays, often include pelvis, T and C-spine as per routine)**

Low Back Pain Guidelines Process

- TOP (?) – ensure adequate stakeholder input (no DI, Ortho, Neuro) was an oversight for this guideline
  - "aimed more at physical activity/pain management"
  - Patient driven issues (FP, want vs. need, issue of "value of knowledge" needs study ? IHE??)

Low Back Pain Guidelines Process

Issues: Red Flags and "consider referral"

Volumes (fear of increased volumes)

Ortho and Neurosurgery want MRI pre-consult what does the FP do??

Resolution ??? Now at KT?

(?) Clinical Network (including imaging expertise) with AMA review and perhaps revise or change referral process (currently has a Low Back Pain subcommittee)

Unintended Consequences

Ottawa Ankle Rules

- **13% increase volume, 3% increase ER visits**

L-Spine X-rays (Red Flags)

- **JAMA (Suarez-Almazor et.al. 1997)**
- **(13% ordered, 44% with guidelines) 238% increase**

CT Head, Peds Trauma (CMAJ, Stiell et al, 2010)

- **KT did not reduce rates of Head CT (65 to 75%, p=0.16)**

Solution

- Complex
- Knowledge Transfer is certainly critical
- Tool must be appropriate within Alberta and patient – physician (clinician) relationship
- One area but a more robust solution is necessary
- CPOE with CDS
- Patient Portal with KT tools (?)