

Order Communications & Choose & Book C&B

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Agenda really Order Comms

- Benefits and Negative Benefits
- Requirements (in a PACS setting)
- Issues
- Development
- Decision Support
- NHS and Non NHS
- Real World example

Benefits

- Image Sharing
- Work flows
 - Ca wait times
 - phones go quiet QA check
- Accuracy
- Constrained data capture in context
- Clinical Prioritisation
- Royal College guidelines
- Auto alerting significant results (HL7)

Negative Benefits

- Workload increase
- Counteract with retrievals Constrain with national & local guidelines in order pathway of current work requests

Requirements (Now)

- Patient ID & Image ID
 - Clean PAS
 - SLA on clean ups in hrs not days/weeks
 - Unique key
 - NHS No?
 - Cant be used in isolation
 - Must come from trusted source (not typed in)
 - Typed in must be traced
 - Flag to determine quality
 - Flag to determine tracing status
 - Never will be 100%
 - NZ use of temp numbers 6m pop have 11m NHS no

PDS service

- GP data right?
- PDS right ?
- Hospital right ?
- None of them

Requirements

- Use of foreign keys
 - Remote ordering from other organisations
 - Specialist contracts (PET/CT/Mobile MRI)
 - Workflow filtering by contract T&C's
 - World class commissioning

Requirements

- Image accession number
 - Unique across NHS?
 - OCS codes can change – don't base any business logic on it
 - Allow “foreign keys” again
 - Allow pre specified Accession number in RIS business logic – i.e. receive remote orders from a foreign organisation/system

Requirements

- Multi-organisational
- Messaging
- HL7
- DICOM
- IHE
- Legacy
- Structured reporting
 - cash flow
 - accreditation

Issues

- Not just radiology out there
- National Programme
- National Order catalogue v Snomed CT
 - Contrast agents - attribute
 - Hanging protocols
- Unique keys
- Meta data
- Enterprise scheduling not just RIS
 - advancing quality

Development

- MDT
 - scheduling MDT & workflows
- Cancer reporting MDS
- structured reporting
 - Pathology and Somerset
 - Analysis
 - Local caching and specialist views
 - Pet/CT
 - Auto alerting Ca reports (HL7)

Other Modalities

- Better viewer security
- sensitive image sets
 - Child abuse etc
- LRS

Other organisations

- cross EPR flows
 - multi PAS/EPR
 - use of standards
 - MDT again
- Shared sites
 - foreign order comms
 - second use of images
 - templating in second organisation

Decision Support

- Good workflow design
 - educates
 - best use of resource
 - links to evidence based medicine
 - Promotes patient pathway
 - advances quality
 - Proactive not reactive alerting
 - right info @ right time

NHS and non NHS

- Order comms to primary / community care
 - local MPI/PDS
- embed orders and results from GP in sec care - avoid duplication
- ISTC's & other Non NHS providers

Success factors

- Speed - thinking speed
- Don't ask questions about service
- Smart routing
- Mandate its use
- Make it available 24/7
- Flexible response locally

C&B

- referral process not order comms
- refer for appointment
- IRMA process missed
- Safety - Welders/MRI
- Business logic missed - contracts
- Clinical context missed in a structured manner
- Not XDS-I complaint
- Might as well fax a referral letter

Real world issues

- Offline guidelines don't work

Pathway design issues

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DESKTOP 7000 HCM
File Edit View Help
00131 <ZZZZDA><N$>
ENTERED FOR: GENERAL CONSULTANT
DPFEQAOT PATIENT LIST
01

-----*PRINT*
> PERSONAL ORDER SET          > MED INFO GUIDE
> PRINT PT LIST              > PATIENT LOCATE
> APPOINTMENTS              > OTHER FUNCTION
> TODAY'S CLINIC            > AMEND DIAG/OPERATION
ERR
```

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DESKTOP 7000 HCM
File Edit View Help
02947 <ZZZZDA>< >
ENTERED FOR: GENERAL CONSULTANT
N MEDICAL INFORMATION GUIDE

LABORATORY
▶ LAB ABBREVIATIONS ▶ ANNOUNCEMENTS
▶ LAB PREP INDEX ▶ HELPFUL HINTS

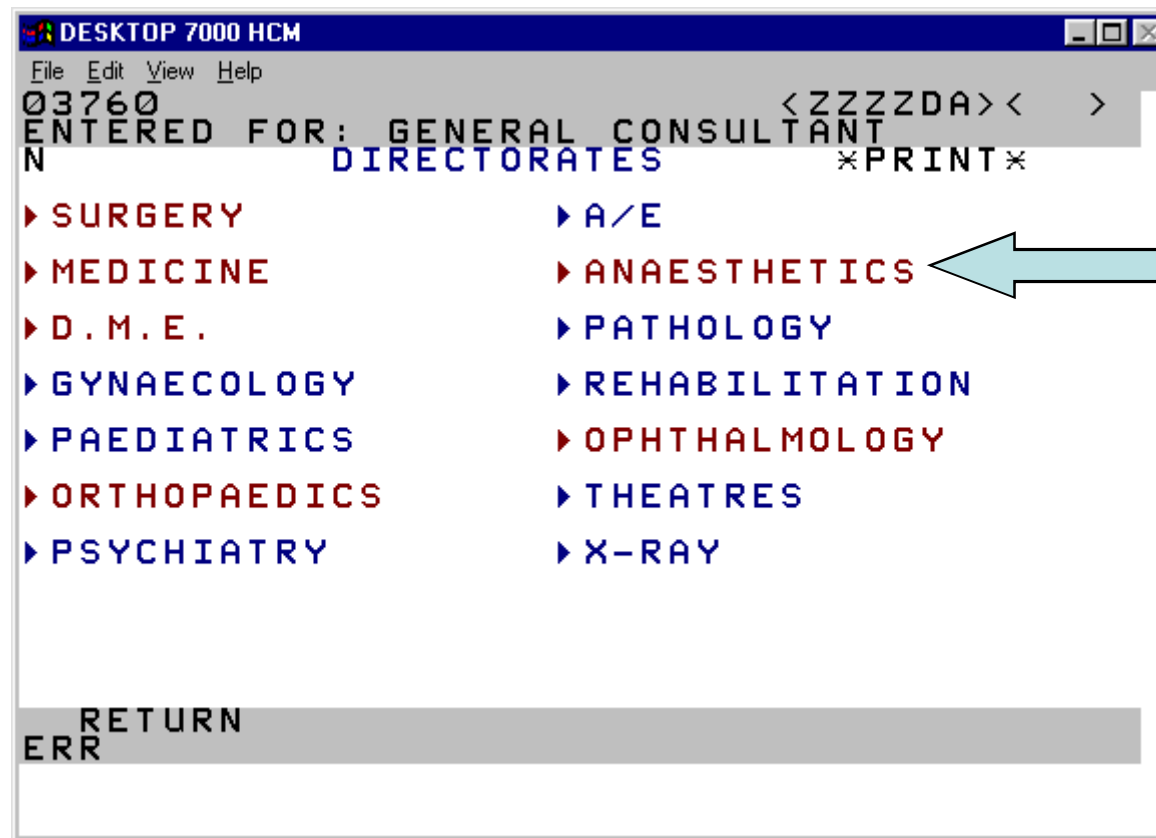
▶ PCIS CONFIDENTIALITY
▶ OUTPATIENT REQUESTING
▶ DIRECTORATE PROTOCOLS
▶ TTH C.D. DRUG PRESCRIBING
▶ G.P. DETAILS
▶ ON-CALL MEDICAL TEAM ROSTER
▶ HEALTH OF THE NATION TARGETS
▶ MEDICAL SECRETARIES TELEPHONE NOS
▶ WARD TELEPHONE NUMBERS
X-RAY

▶ VIEW LOCATION OF FILMS
▶ VIEW LIST OF EXAMINATION

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Offline guidelines



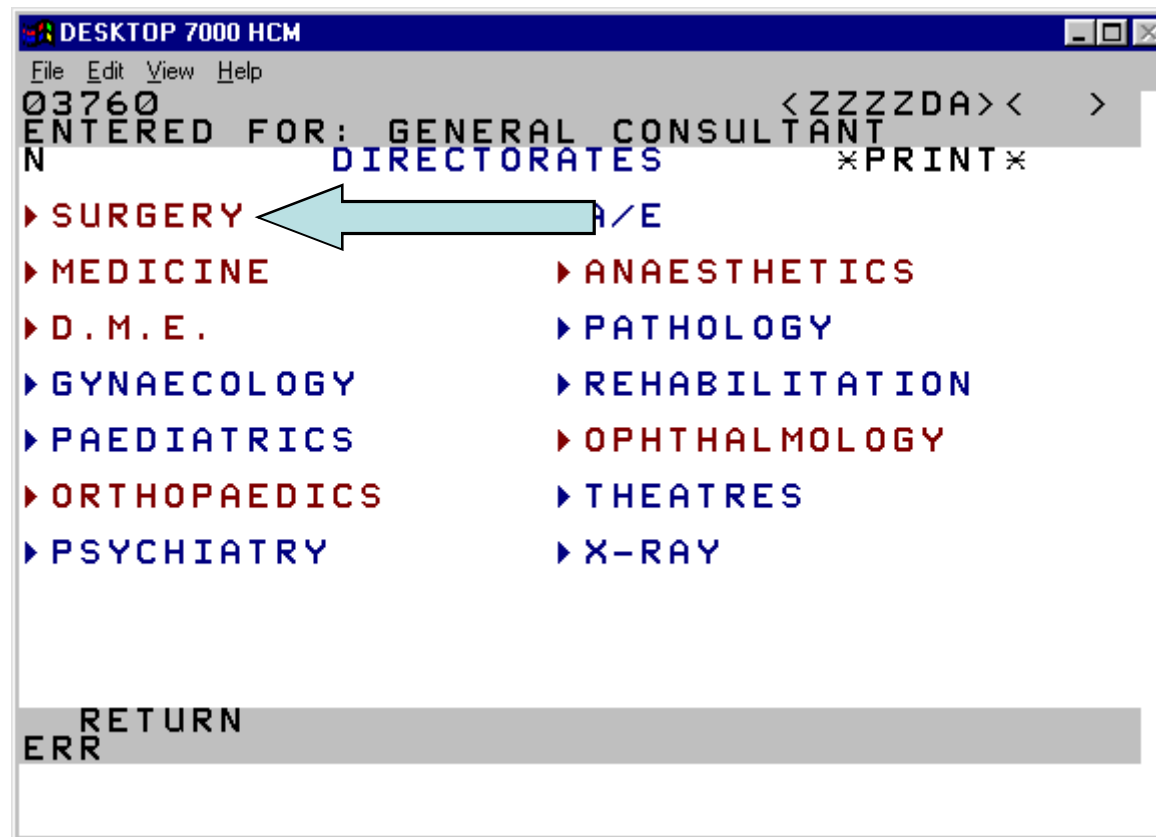
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DESKTOP 7000 HCM
File Edit View Help
03996 <ZZZZDA>< >
ENTERED FOR: GENERAL CONSULTANT
N PRE-OPERATIVE INVESTIGATIONS *PRINT*
THE ANAESTHETIC DEPARTMENT REQUIRE
FOLLOWING INVESTIGATIONS TO BE
PERFORMED PRE-OPERATIVELY EVEN IN
ASYMPTOMATIC PATIENTS.
HB -- PATIENTS OVER 40 YEARS OF AGE,
SCHEDULED FOR MAJOR SURGERY (IE
THOSE WHO MAY REQUIRE BLOOD
TRANSFUSION).
U+E-- PATIENTS OVER 60 YEARS OF AGE,
SCHEDULED FOR MAJOR SURGERY.
--- ALL PATIENTS RECEIVING CHRONIC
DIURETIC THERAPY.
E.C.G. ALL PATIENTS OVER 60 YEARS OF
AGE.
CXR--- ASYMPTOMATIC PATIENTS DO NOT
REQUIRE ROUTINE CXR.
          ▶ CONTINUE
RETURN
ERR
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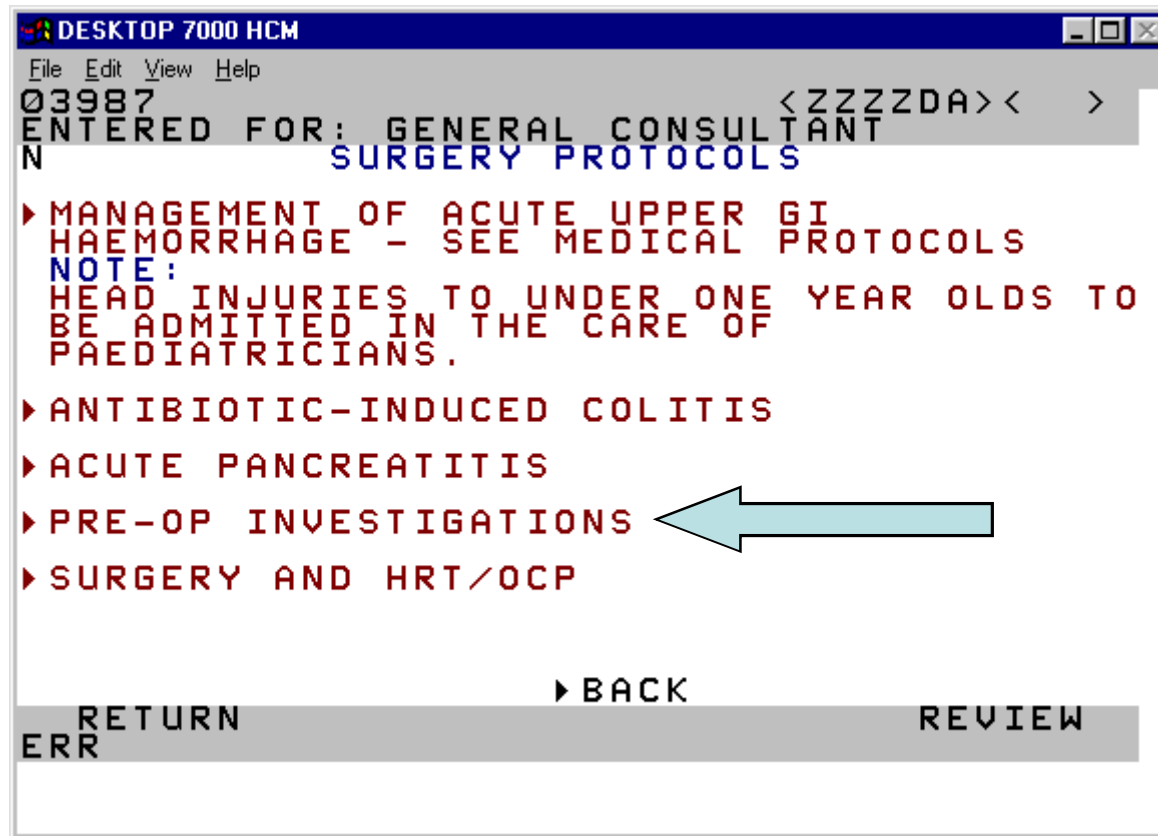


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DESKTOP 7000 HCM
File Edit View Help
20937 <ZZZZDA>< >
ENTERED FOR: GENERAL CONSULTANT
N ANAESTHETIC PROTOCOLS
▶ PRE-OPERATIVE INVESTIGATIONS
▶ ANTI-EMETIC POLICY
▶ DRUGS, FASTING AND DENTURES BEFORE ANAESTHESIA
▶ MANAGEMENT OF PATIENTS WITH UPPER RESPIRATORY TRACT INFECTION
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Moved to Surgery..





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ENTERED FOR: GENERAL CONSULTANT
N PRE-OPERATIVE INVESTIGATIONS *PRINT*
THE ANAESTHETIC DEPARTMENT REQUIRE
FOLLOWING INVESTIGATIONS TO BE
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TRANSFUSION).
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SCHEDULED FOR MAJOR SURGERY.
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DIURETIC THERAPY.
E.C.G. ALL PATIENTS OVER 60 YEARS OF
AGE.
CXR--- ASYMPTOMATIC PATIENTS DO NOT
REQUIRE ROUTINE CXR.
RETURN
ERR
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Xray pathway

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17907 D FOR: GENERAL CONSUL<ZZZZDA>< >
CUNNINGHAM, CYNTHIA
XR X-RAY COMMON

▶GENERAL COMMON
THIS CONTAINS ALL X-RAY PROCEDURES.

▶GASTROENTEROLOGY COMMON
LIMITED SPECIFIC X-RAY PROCEDURES.

▶RHEUMATOLOGY COMMON
LIMITED SPECIFIC X-RAY PROCEDURES.

▶FRACTURE CLINIC COMMON
LIMITED USE IN # CLINIC ONLY.

▶NEONATE/PAED COMMON
USE FOR CHILDREN/NEONATES SPECIFICALLY.

▶A/E COMMON
USE THIS SELECTION IF YOUR PATIENT IS
CURRENTLY IN A/E.
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File Edit View Help

17000 D FOR: GENERAL CONSUL <ZZZZDA> < >
 CUNNINGHAM, CYNTHIA
 XR X-RAY: COMMON

▶ CHEST ← I STUDIES *HELP*
 ▶ ABDOMEN ▶ URINARY STUDIES ▶ AB
 ▶ HEAD & NECK ▶ BILIARY STUDIES ▶ CD
 ▶ SPINE ▶ VENOUS STUDIES ▶ E
 ▶ PELVIS ▶ VASCULAR ▶ F
 ▶ UPPER LIMB ▶ ARTHROGRAPHY ▶ GH
 ▶ LOWER LIMB ▶ MAMMOGRAPHY ▶ I
 ▶ BONY THORAX ▶ THEATRE WORK ▶ JK
 ▶ SHOULDER GIRDLE ▶ ORAL SURGERY ▶ LM
 ▶ NO
 ▶ PR
 ▶ ST
 ▶ UV
 ▶ WZ

RETURN MASTER REVIEW
 ERR TYPE RETRIEVE

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DESKTOP 7000 HCM
File Edit View Help
17001 D FOR: GENERAL CONSUL<ZZZZDA>< >
CUNNINGHAM, CYNTHIA
XR X-RAY: CHEST
CHEST ←
CHEST RIGHT LATERAL
CHEST LEFT LATERAL
CHEST EXPIRATION FILM
CHEST PENETRATED FILM
CHEST APICAL VIEW
CHEST OBLIQUE VIEWS

THORACIC INLET

PACEMAKER INSERTION

DIAPHRAGM SCREENING

CARDIAC SCREENING

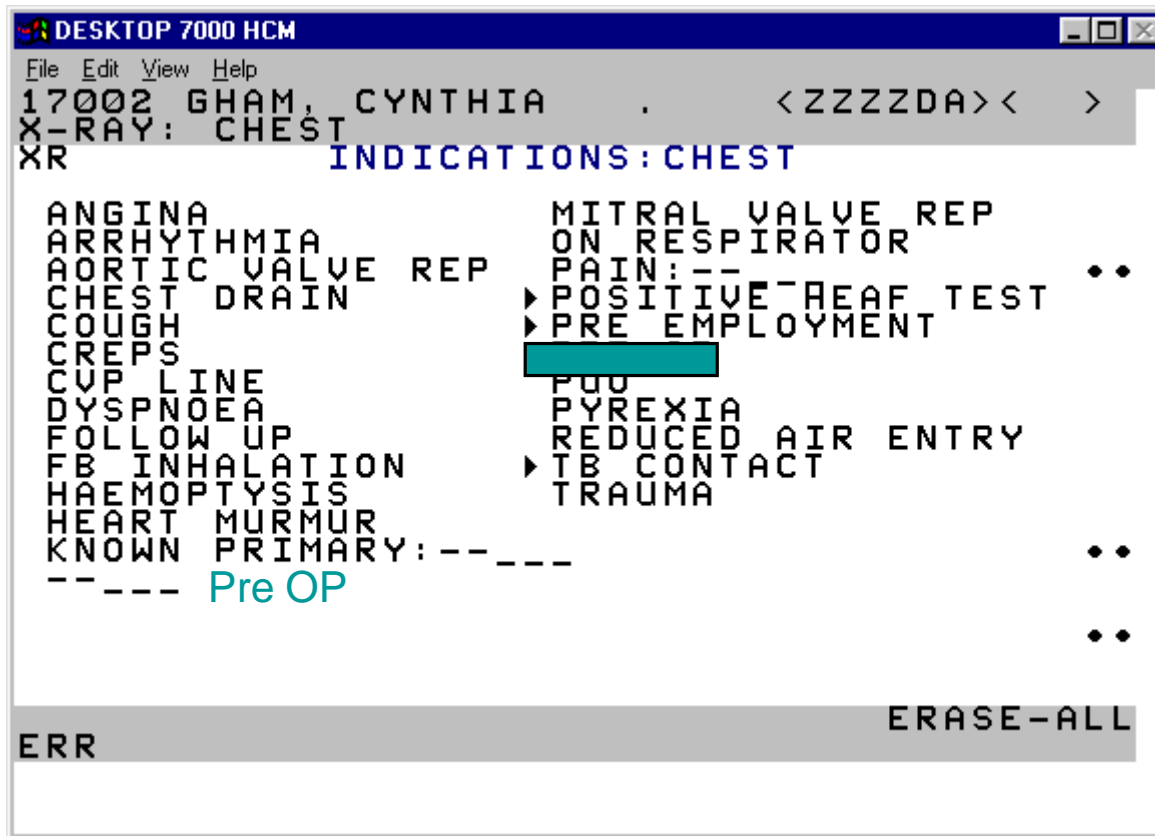
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DESKTOP 7000 HCM
File Edit View Help
17002 GHAM, CYNTHIA . <ZZZZDA>< >
X-RAY: CHEST
XR INDICATIONS: CHEST

ANGINA
ARRHYTHMIA
AORTIC VALVE REP
CHEST DRAIN
COUGH
CREPS
CVP LINE
DYSPNOEA
FOLLOW UP
FB INHALATION
HAEMOPTYSIS
HEART MURMUR
KNOWN PRIMARY: - - - -
- - - -

MITRAL VALVE REP
ON RESPIRATOR
PAIN: - -
▶ POSITIVE HEAF TEST ..
▶ PRE EMPLOYMENT
▶ PRE OP ←
PUO
PYREXIA
REDUCED AIR ENTRY
▶ TB CONTACT
TRAUMA

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File Edit View Help
17002 GHAM, CYNTHIA . <ZZZZDA>< >
X-RAY: CHEST
XR INDICATIONS: CHEST

ANGINA
ARRHYTHMIA
AORTIC VALVE REP
CHEST DRAIN
COUGH
CREPS
CVP LINE
DYSPNOEA
FOLLOW UP
FB INHALATION
HAEMOPTYSIS
HEART MURMUR
KNOWN PRIMARY: ---
---

MITRAL VALVE REP
ON RESPIRATOR
PAIN: --
▶ POSITIVE HEAF TEST ..
▶ PRE EMPLOYMENT
▶ PRE OP
PUO
PYREXIA
REDUCED AIR ENTRY
▶ TB CONTACT
TRAUMA

ERR ERASE-ALL
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DESKTOP 7000 HCM
File Edit View Help
17971 GHAM, CYNTHIA <ZZZZDA>< >
X-RAY: CHEST; INDICATIONS: PRE OP
XR PRE-OP CHEST X-RAY

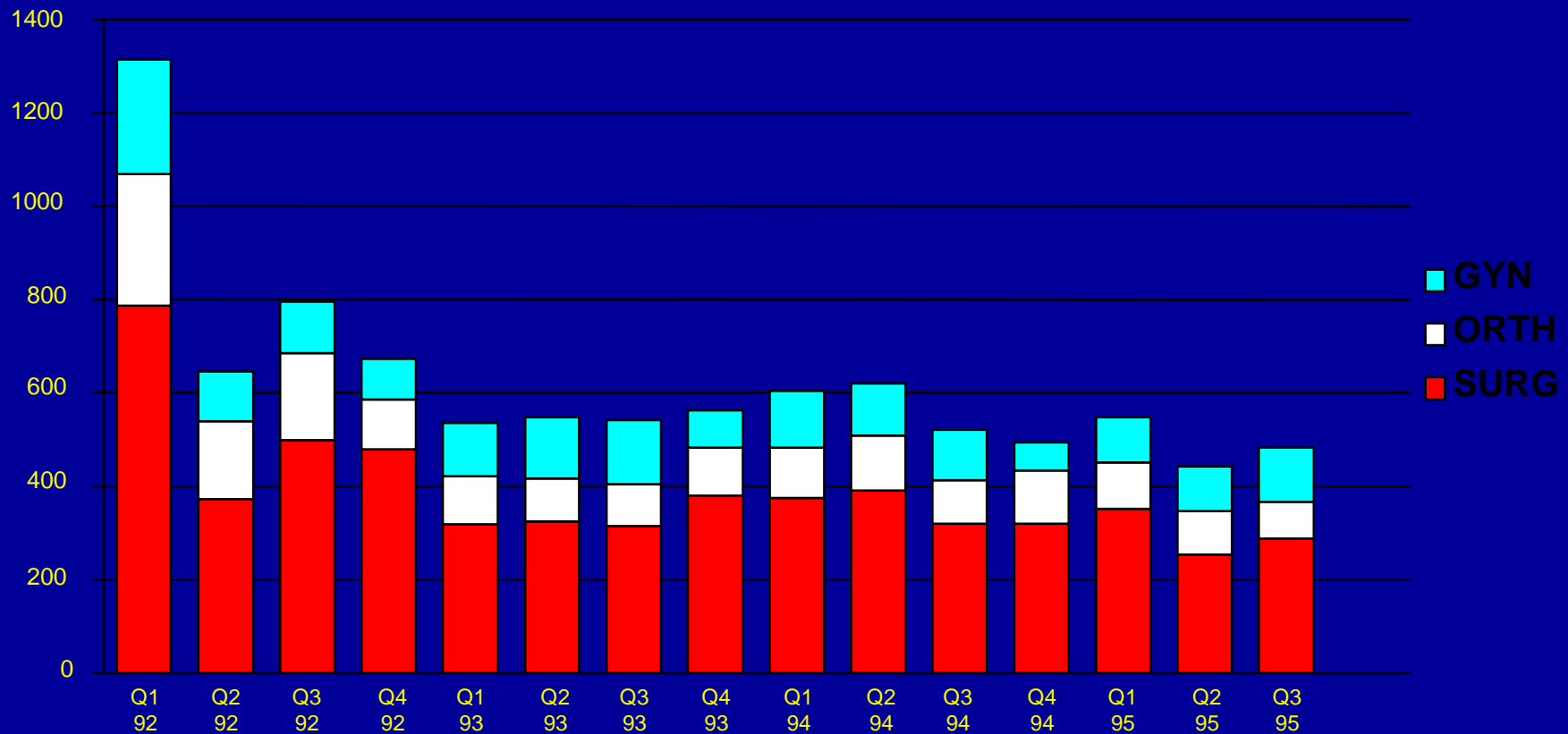
THE ANAESTHETICS DEPARTMENT DOES NOT
REQUIRE ROUTINE PRE-OP CHEST X-RAYS ON
ASYMPTOMATIC PATIENTS OF ANY AGE.
PLEASE TYPE IN ALL RELEVANT CLINICAL
INDICATIONS AND SEND.

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Introduction of Pre-Op Chest & Radiology Guidelines into PCIS

Total Number of Chest a/o Ribs Examinations by Quarter (all indications)
(General Surgery/Orthopaedics/Gynaecology)



Examples of guidelines in ..

- Anaesthetists & PCIS
- Directorate Protocols
- Examples of Guidelines linked to Order Entry
 - Radiology & Chest X-Rays
 - Royal College / Local Guidelines

Other Examples of Guidelines.....

- Royal College Guidelines.....
 - Barium Meal, Barium Enema, Spine, Chest, Skull, Sinuses, Hip, Pelvis, Abdomen
- Local Guidelines.....
 - Venogram, Rheogram, Echocardiograms
- British Thoracic Society.....
 - V/Q (Lung) Scans