



LABORATORY TESTING FOR TRANSGENDER PEOPLE

MELANIE ADRIAANSEN, TE WHATU ORA - WAITEMATĀ
LABORATORIES



INTRODUCTION

- Many transgender and non-binary people undergo hormone therapy. This helps to align a person's physical body with their gender identity.
- However, some people will socially affirm e.g. change name, gender markers – without medical affirmation.
- Testosterone Therapy:
↑ Muscle Mass ↓ Fat Mass
- Oestradiol + anti-androgen therapy:
↓ Muscle Mass ↑ Fat Mass
- What does this mean for Laboratory Testing?

LABS - 3 POSSIBLE SCENARIOS

1. NO INDICATION TO LABS OF TG/NB STATUS

Pt Samples will be processed according to gender on NHI. Gender on NHI may not match where the pt is at.

2. NO SEX/GENDER INDICATED

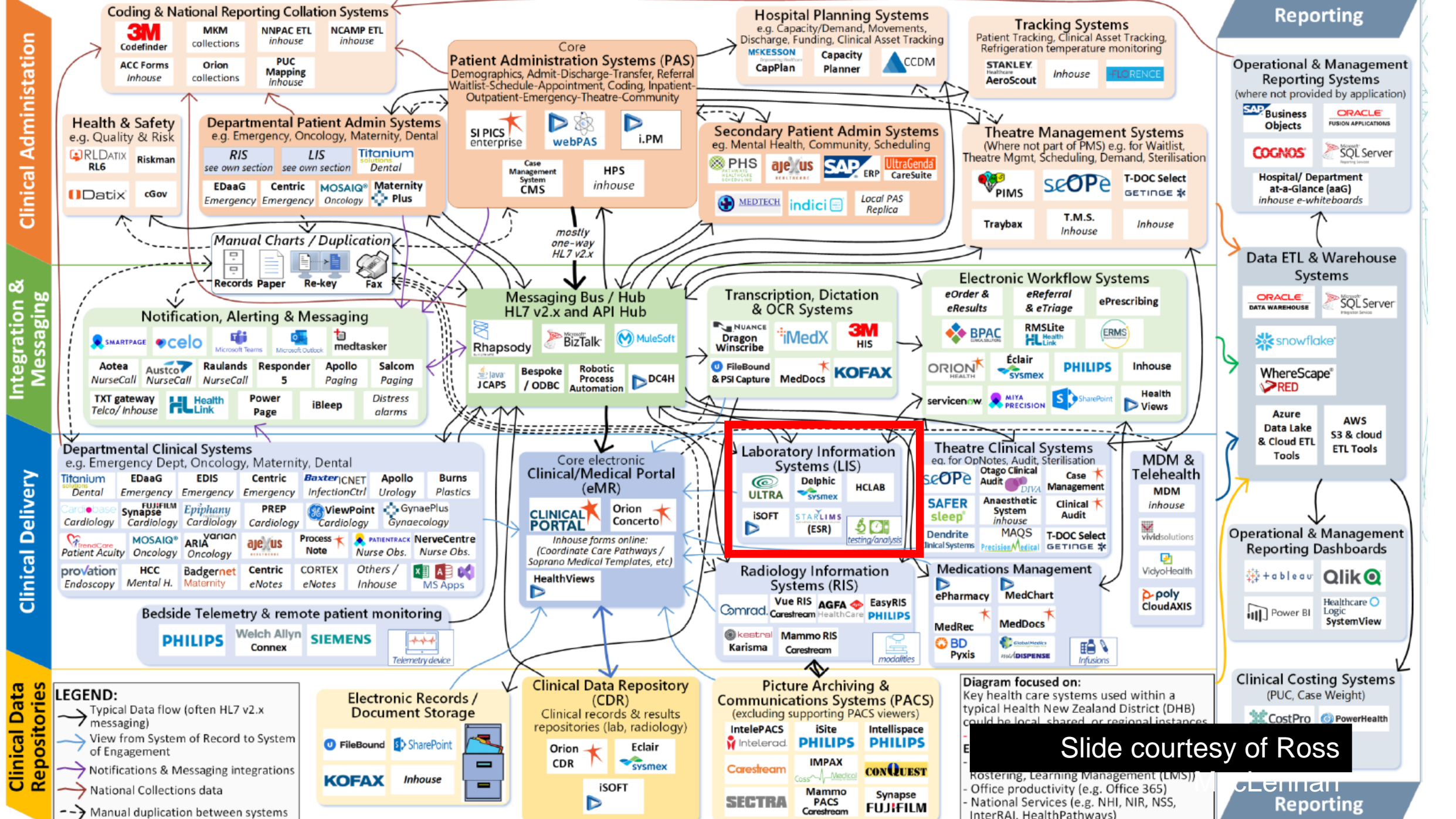
No Ref Ranges or default Ref Ranges.
Relies on clinician interpretation.

3. TG/NB STATUS IS INDICATED

Pt Samples will be processed according to correct gender but often with delays.

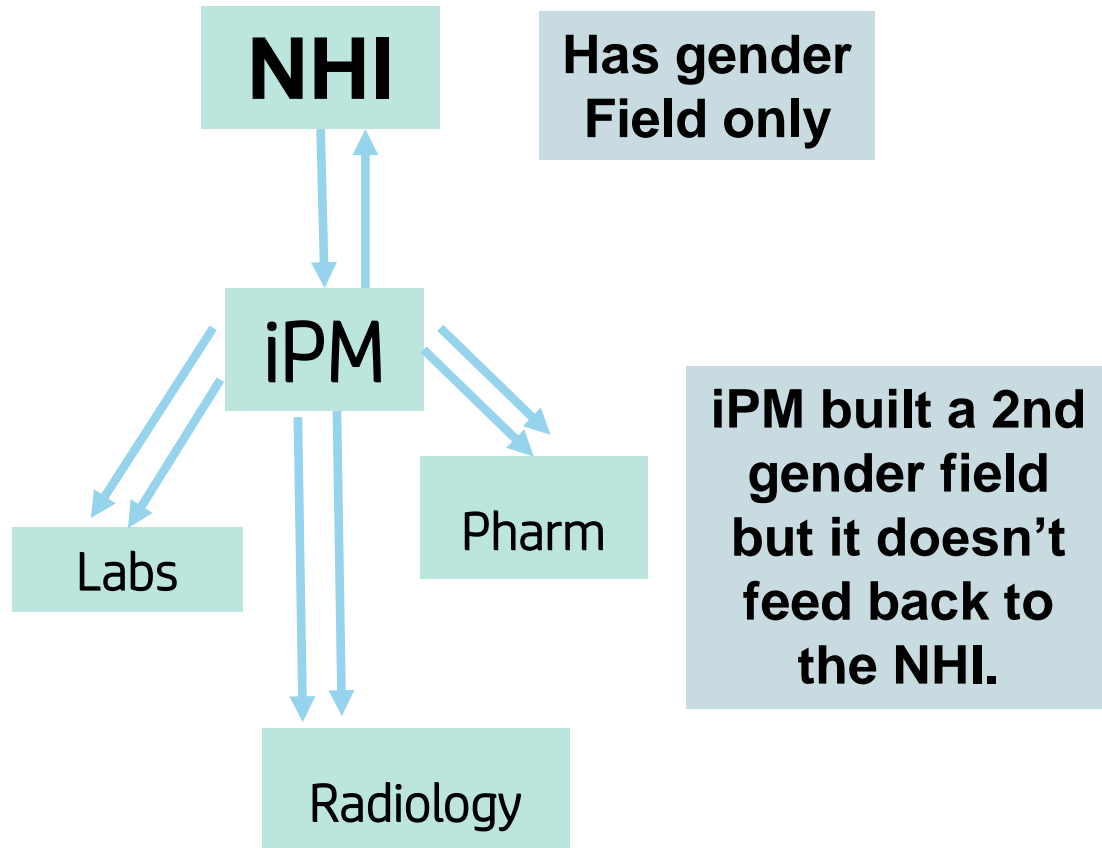
1. NO INDICATION TO LABS

- If a patient is TG/NB there is no easy way to communicate this to a team of clinicians, including the Lab/Radiology/Pharmacy.
- Limitations of IT & EMR make updating patient info challenging.
- Phleb can address patients with 'deadnames' still attached to NHI.
- Incorrect name, pronoun or sex marker can cause distress & dysphoria.
- Lack of visibility
- Solution = IT Upgrade?



Slide courtesy of Ross

CONTROLLED BY THE NHI SYSTEM...



Goals (2020): Develop iPM integration so that it can correctly send Gender to the NHI.

Goals (2020): Develop iPM's integration to send Sex and Gender to downstream systems like Éclair, Delphic, LIS etc.

NZ NHI SYSTEM 1.10.2025



- ◇ Create 12,000 new NHI's per month
- ◇ New NHI format = AAANNAX

1. Sex Assigned at Birth (?)

- Male
- Female
- Intersex
- None of the above

2. Gender Category (mandatory)

- Male/ Tāne
- Female/ Wāhine
- Another Gender/ He ira kē anō
- Unspecified or Unknown

Lab to use this format?

Health Information Standards Organisation (HISO), Te Whatu Ora - Health New Zealand

(April 2023). ISBN: 978-1-99-110036-8

FLAGGING 'ABNORMAL' TEST RESULTS

E.g. Female Hb Ref range = 115 – 155g/L

LIS designed to:

1. Identify the patient sex and age
2. Apply reference ranges
3. Flag abnormal test results

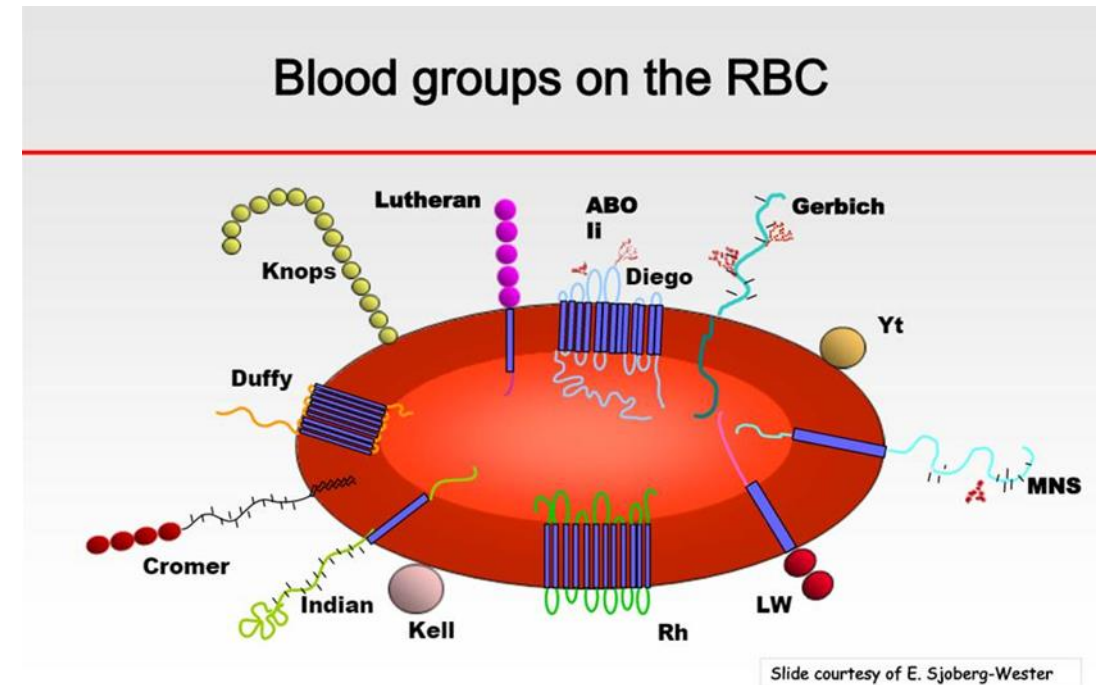
Inappropriate Ref Ranges can be confusing or meaningless.

Full Blood Count

◆ Hb - Haemoglobin	113	g/L	L 130-175
◆ RBC - Red Cell Count	4.06	E+12/L	L 4.30-6.00
◆ Hct - Haematocrit	0.34		L 0.40-0.52
◆ MCV - Mean Cell Volume	84	fL	80-99
◆ MCH - Mean Cell Haemoglobin	28.0	pg	27.0-33.0
◆ RDW	13.4		12.0-14.6
◆ MCHC - Mean Cell Hb Conc	331	g/L	320-360
Platelet Count	306	E+9/L	150-400
◆ WBC - White Cell Count	9.10	E+9/L	4.00-11.00
◆ BLOOD FILM:	Test Pt, No film. ALS		
WBC Differential	WBC DIFFERENTIAL E+9/L		
Neutrophils	6.50	E+9/L	1.9-7.5
Lymphocytes	2.00	E+9/L	1.0-4.0
Monocytes	0.30	E+9/L	0.2-1.0
Eosinophils	0.20	E+9/L	0.0-0.5
Basophils	0.20	E+9/L	0.0-0.2

BLOOD TRANSFUSION

- STRICT CRITERIA FOR SAMPLE LABELLING
- PREVENTS TXN REACTION
- PTS CAN HAVE AN ALIAS RECORDED
- KELL NEG RED CELLS ARE ISSUED TO PEOPLE OF CHILD-BEARING AGE (<55 YEARS)
- WE COULD MISS TRANS MEN FROM RECEIVING K-RBC'S



2. NO SEX OR GENDER INDICATION = 'OTHER/ANOTHER'

Test Name	Default Reference Range	Test Name	Default Reference Range
Urate	0 - 0	Iron Binding Capacity	No Range
FSH	All Ranges as Comments	Myoglobin	No Range
LH	All Ranges as Comments	Progesterone	No Range
CK	Male	Prolactin	No Range
CKMB	Male	Testosterone	No Range
Creatinine			

Comments:

The patients gender was not specified; reference ranges may be gender specific and this should be taken into consideration when interpreting the result. If the patient is on treatment for gender reassignment this may also affect interpretation of some tests.

Soluble Transferrin Receptor

Male

Ceruloplasmin

Female

3. TG/NB IS KNOWN

- Trans man in their 20's
- Presentation to ED
- Lab samples marked as male
- HVS (high vaginal swab) requested
- Need to:
 - De-register the M sex marker
 - Register with F marker
 - Request test on patient
 - Re-register patient with M marker.
- = Confusion & Delays with sample

The screenshot shows a 'Create Patient' window with the following fields and values:

- Patient ID: ZZZ9994
- Encounter: [Empty]
- Name: LABTEST, MICHAEL
- Sex: M (dropdown menu is open showing M, F, P, A)
- DOB: 14-05-1985
- Age: [Empty]
- Units: [Empty]
- Alias: [Empty]
- Comment: [Empty]
- Ethnicity: A (dropdown menu)
- Address: Street, Suburb, City, Province, Post code, Country (all empty)

Buttons: Select(F4), Update(F3), Clear, OK, Cancel.

BEGINNING HORMONE THERAPY (HT)

- Once a person begins HT, the ref range of the affirmed gender should be used for sex-specific tests. (Trans Health Research Group, Aus).
- How does the lab know if/when HT has started?
- We rely on info on Lab forms.....

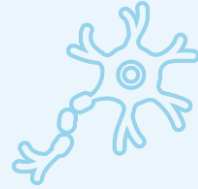


REFERENCE RANGES - OPTIONS

1. No Ref Ranges
2. Wide Ref Ranges e.g., Hb = 115 – 175g/L
3. Both Male & Female Ref Ranges
4. Mixed Ref Ranges



OTHER LABS

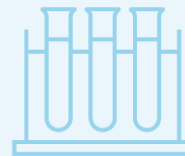


All Labs should aim to:

- Remove sex specific testing restrictions
- Have an SOP on how to process samples from TG individuals



Community testing = the pt will be able to select the sex marker to be printed on final reports



An updated sex marker relies on the doctor providing labs with sex/gender info.



What would you like to see from Labs?

Reference: Cheung, A.S., Lim, H.Y., Cook, T., Zwickl, S. Ginger, A., Chiang, C. et al. (2021). Approach to Interpreting Common Laboratory Pathology Tests in Transgender Individuals. *Clin Endocrinol Metab.* 106(3): 893 – 901.