



**Imics**  
Loddon Mallee  
Integrated Cancer Service

# Using digital medical records and electronic systems to map the optimal care pathway for oesophagogastric cancer in regional Victoria

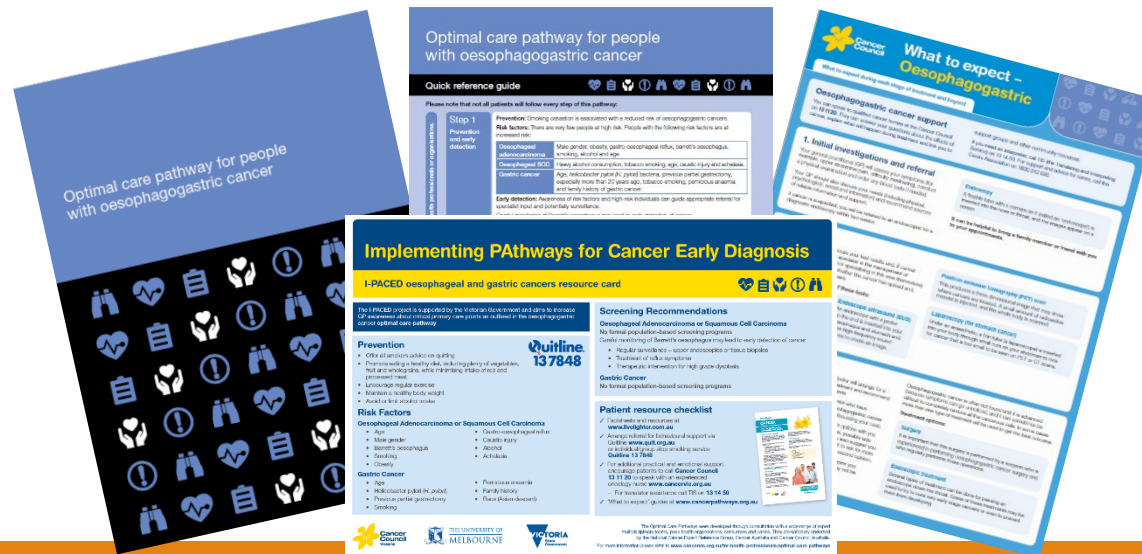
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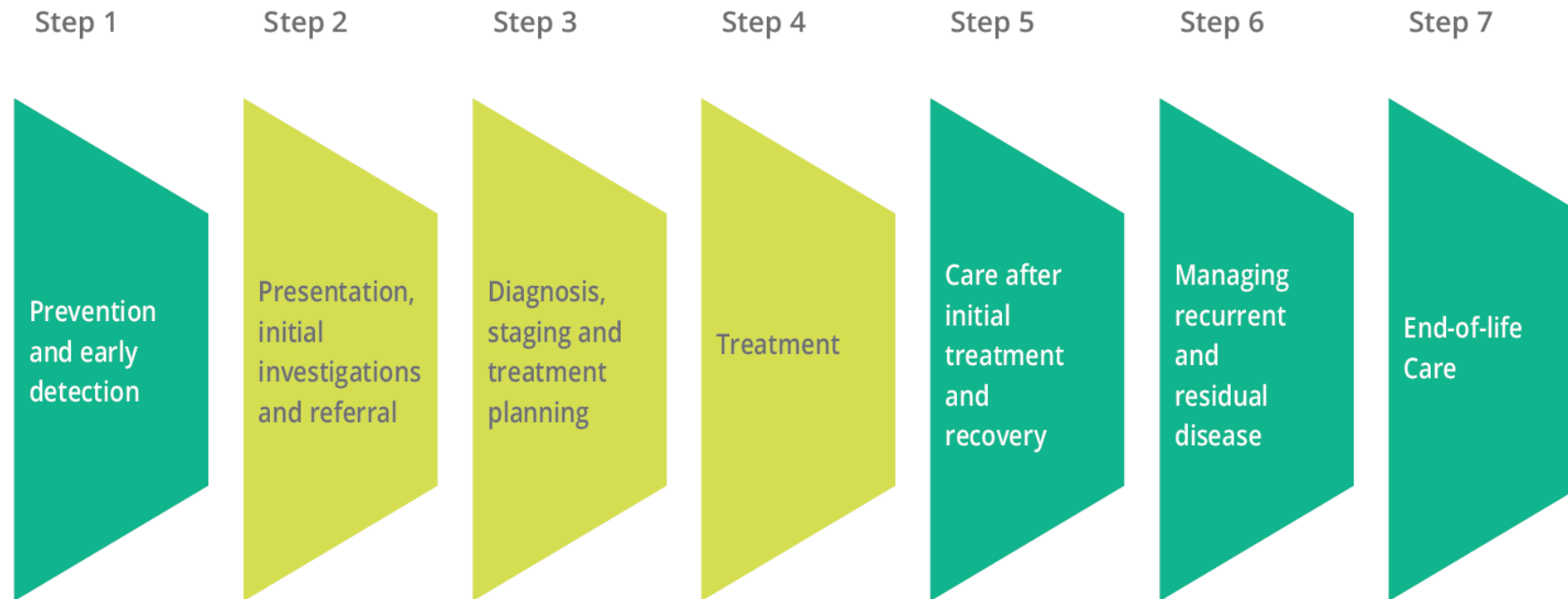
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# Optimal care pathways (OCPs) for people with cancer

- Outline the best cancer care for specific tumour types
- Describe key steps in a patient's cancer journey
- Endorsed by government and key clinical authorities
- Provide expected standards of care at each step regardless of where a patient lives or receives cancer treatment
- Available on Cancer Council Victoria website - <https://www.cancervic.org.au/>



# Steps in the OCPs for people with cancer



# Optimal timeframes for people with oesophagogastric (OG) cancer

Step in pathway	Care point	Timeframe
Presentation, Initial Investigations and Referral	2.1 GP appointment	A patient with concerning (red flag) symptoms should be seen by their GP within two weeks.
	2.2 Referral for endoscopy	Endoscopy completed within two weeks.
	2.3 Specialist appointment	Within two weeks. Imaging/workup as directed by the specialist may precede but should not delay referral.
Diagnosis, Staging and Treatment Planning	3.1 Diagnosis	Workup needs to be complete for presentation at MDT within two weeks of diagnosis.
	3.2 Staging	
	3.3 Multidisciplinary meeting	Within four weeks of GP referral.
Treatment	4.2 Treatment	Within two weeks of MDT discussion.

# Mapping optimal care pathways in the digital age

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# Aim

To determine the extent to which patient journeys could be mapped against the OCP for people with OG cancer, using the DMR and electronic systems at a public hospital in the LMR



# Method: Case ascertainment

- Data source: Victorian Cancer Registry (VCR)



- Definition of an OG cancer case:

Any person newly diagnosed at Bendigo Health

during 2017 or 2018 with OG cancer (ICD-10-AM codes C15 or C16)



- Complete case ascertainment rather than random sampling

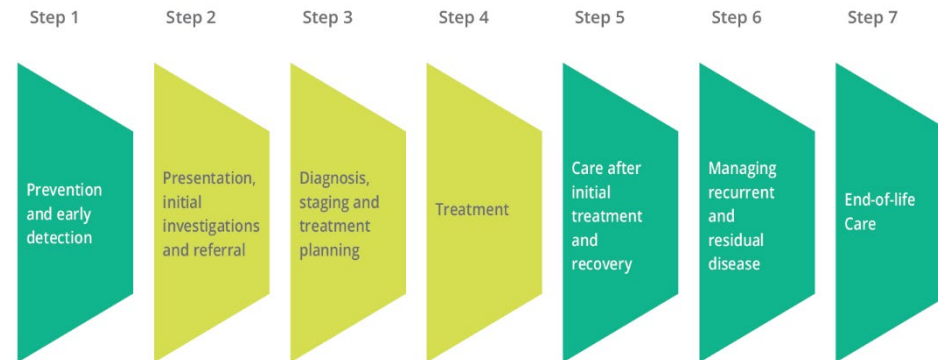


# Method: Data collection

- Retrospective clinical audit

- Collection of six key OCP dates

- Referral into hospital
- First specialist appointment
- Diagnosis (confirmation)
- First MDT
- First treatment
- Palliative care referral



- Mapping of service and data systems to identify all relevant digital or electronic data sources at Bendigo Health



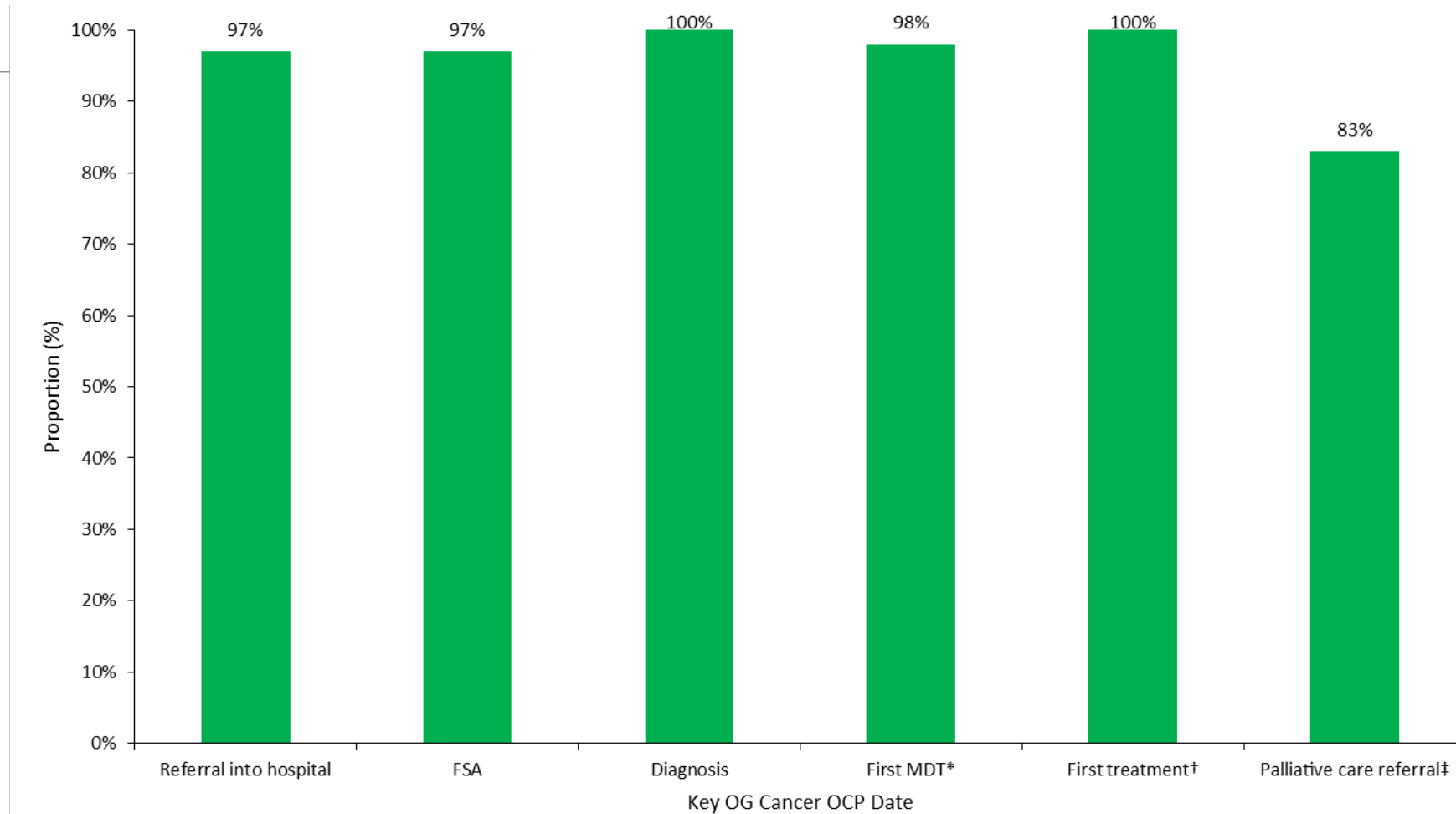
# Method: Data analysis

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Calculation of the proportion of dates captured for each of the six key OCP dates:

$$\text{Proportion (\%)} = \frac{\text{No. of OG cancer cases with dates documented}}{\text{Total no. of OG cancer cases audited}} * 100$$

# Results: Percentage capture of six key OG cancer OCP dates (n = 62)



\* of 50 people (81%) discussed at an MDT

† of 48 people (77%) who received active treatment

‡ of 24 people (39%) who received palliative care

OG – oesophagogastric

OCP – optimal care pathway

FSA – first specialist appointment

MDT – multidisciplinary team meeting



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# Results: Hospital data sources required for OCP timeframe auditing

Hospital Database		Type of Data
Electronic	iPM	Extensive data on inpatient management
	CanMAP	Clinical details from MDMs to inform treatment recommendations
	Sherlock	Test results, community programs, discharge summaries and correspondence
Digital	Vitro DMR	A digital version of the paper medical record
Electronic	Synapse	Radiology data
	Verdi	Details of radiotherapy appointments
	Medtech	Details of oncology appointments
	UNITI	Specific health programs (e.g. community and consultancy palliative care)
	FIXUS	Specific health programs (e.g. community and consultancy palliative care)

DMR – digital medical record

# Results: Resources required for OCP timeframe auditing

- Support from health services
  - HIMs
  - ICT staff
  - Clinicians



- Auditing EFT: Victorian Integrated Cancer Services (VICS) may have capacity – OCP implementation & sustainability
- Auditing time: 30-60 minutes per case
  - e.g. up to 62 hours (~ 8 nine-to-five workdays) to audit 62 cases

# Optimal data capture for optimal care pathways (OCPs)

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iPM

CanMAP

Sherlock

Vitro DMR

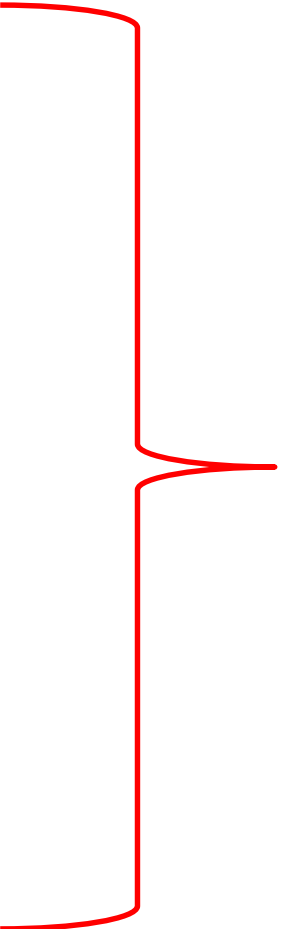
Synapse

Verdi

Medtech

UNITI

FIXUS



**EMR**



# Conclusion

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- While it is possible to map OCP timelines for almost all people with OG cancer using Bendigo Health's DMR and electronic systems, considerable work is currently required to obtain data
- LMICS is advocating for enhanced interoperability and inclusion of key OCP dates in EMRs at regional hospitals



# Acknowledgements

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