Electronic Medical Record (EMR) in a Word Document

Dr Jack Yu Basic Physician Trainee Lyell McEwin Hospital, NALHN Adelaide, SA Australia RACP Congress 2019

Contents:

•HIMSS & current EMR adoption

The template

Confidentiality

Pilot intervention results

•Where to from here?

| STAGE | HINSS Analytics EMRAM EMR Adoption Model Cumulative Capabilities |
|-------|---|
| 7 | Complete EMR; External HIE; Data Analytics, Governance, Disaster Recovery, Privacy and Security |
| 6 | Technology Enabled Medication, Blood Products, and Human Milk Administration; Risk Reporting; Full CDS |
| 5 | Physician documentation using structured templates; Intrusion/Device Protection |
| 4 | CPOE with CDS; Nursing and Allied Health Documentation; Basic Business Continuity |
| 3 | Nursing and Allied Health Documentation; eMAR; Role-Based Security |
| 2 | CDR; Internal Interoperability; Basic Security |
| 1 | Ancillaries - Laboratory, Pharmacy, and Radiology/Cardiology information systems; PACS; Digital non-DICOM image management |
| 0 | All three ancillaries not installed |

HIMSS Analytics 2018, 'Electronic Medical Record Adoption Model', accessed Oct 2018 <www.himssanalytics.org>

Current EMR Adoption

- Hospitals at <u>Stage 7</u> of EMRAM
 - Hospitals in the United States 351 (6.4%)
 - Hospital in Australia 2

5

• Hos

• Ho:

Hospitals at <u>Stage 6</u> of EMRAM



Physician documentation using structured templates; Intrusion/Device Protection

New Zealand has 3 district health boards at stage 5



- **EPAS** South Australia's EMR since 2011
 - Cost to date: AUD \$471 million
 - Not implemented at NALHN Lyell McEwin Hospital
 - Currently at Stage 5 of EMRAM



<u>Objective</u>: To develop a minimum cost EMR

Create my own program?

or

Use existing technology

Use existing hospital infrastructure



•Minimal change = minimal retraining = easier to implement



Microsoft Word

- Familiar word processing capabilities
- Spell check
- Ctrl + Z = Undo
- Widely available
- Widely used
- = Minimise Cost \$\$
- = Minimal retraining
- = Easier to implement





Why use a ten

- Easy to use & c
- Automation feat
- Ensures inclusi
 - Date & time
 - Doctor identifica
 - Doctor contact ir



a template entation

۱СУ



| UR99999 | |
|----------|--------|
| Surname | |
| | |
| Name | |
| 99/99/99 | Gender |

| UR99999 | |
|----------|-----------------|
| Surname | |
| Name | |
| 99/99/99 | Gender |
| | Surname Name |

Gen Med Progress Summary

09:00

01/06/2018

| Physio: N/A | OT: N/A |
|-----------------------|-------------------------------------|
| Speech Path: , | Social work: N/A |
| ACAT: N/A | Planned Discharge Location: Pending |
| Profile: | |
| Presentation: | |
| ssues this admission: | |
| #1 - | |
| • | |
| #2 - | |
| • | |
| | |
| | |
| | |

| 01/06/2018 | Gen Med Ward Round |
|------------|---|
| 09:00 | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Intern#1337) |
| | Current Issues: |
| | #1 - |
| | #2 - |
| | |
| | S/ |
| Hb: | • |
| Plt: | |
| | |
| WCC: | 0/ |
| CRP: | |
| | |
| Na: | |
| к: | Imp/ |
| Mg: | |
| | PLAN/ |
| Creat: | 1. |
| Urea: | |
| | |
| Alb: | |
| Bil: | |
| GGT: | |
| AST: | |
| ALT: | |
| ALP: | |

| UR99999 | |
|----------|--------|
| Surname | |
| Name | |
| 99/99/99 | Gender |

| UR99999 | | |
|----------|---|--------|
| Surname | | |
| Name | | |
| 99/99/99 | (| Gender |



| lied Health and Discharge Plann | ing: |
|---------------------------------|-------------------------------------|
| Physio: N/A | OT: N/A |
| Speech Path: , | Social work: N/A |
| ACAT: N/A | Planned Discharge Location: Pending |
| ofile: | |
| esentation: | |
| sues this admission: | |
| l- | |
| • | |
| 2 - | |
| • | |
| | |
| | |
| | |
| | |
| | |
| | |

| 01/06/2018 | Gen Med Ward Round |
|------------|---|
| 09:00 | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Intern#1337) |
| | Current Issues: |
| | #1 - |
| | #2 - |
| | |
| | S/ |
| Hb: | • |
| Plt: | |
| | |
| WCC: | O/ |
| CRP: | |
| | |
| Na: | |
| к: | Imp/ |
| Mg: | |
| | PLAN/ |
| Creat: | 1. |
| Urea: | |
| | |
| Alb: | |
| Bil: | |
| GGT: | |
| AST: | |
| ALT: | |
| ALP: | |
| | |

| | | | Surname Name | |
|------------|------------------------------------|----------|----------------------|-----------------|
| | | | 99/99/99 | Gender |
| | | | | |
| 01/06/2018 | Gen Med Prog | ress Sum | marv | |
| 09:00 | Allied Health and Discharge Planni | | , | |
| 1 | Physio: N/A | | OT: N/A | |
| | Speech Path: , | | Social work: N/A | |
| | ACAT: N/A | | Planned Discharge Lo | cation: Pending |
| ' | Profile: | | | |
| | Presentation: | | | |
| | Issues this admission: | | | |
| | #1 - | | | |
| | • | | | |
| | #2 - | | | |
| | <i></i> | | | |
| | • | | | |
| | • | | | |
| | • | | | |
| | • | | | |
| | • | | | |
| | • | | | |
| | • | | | |
| | • | | | |

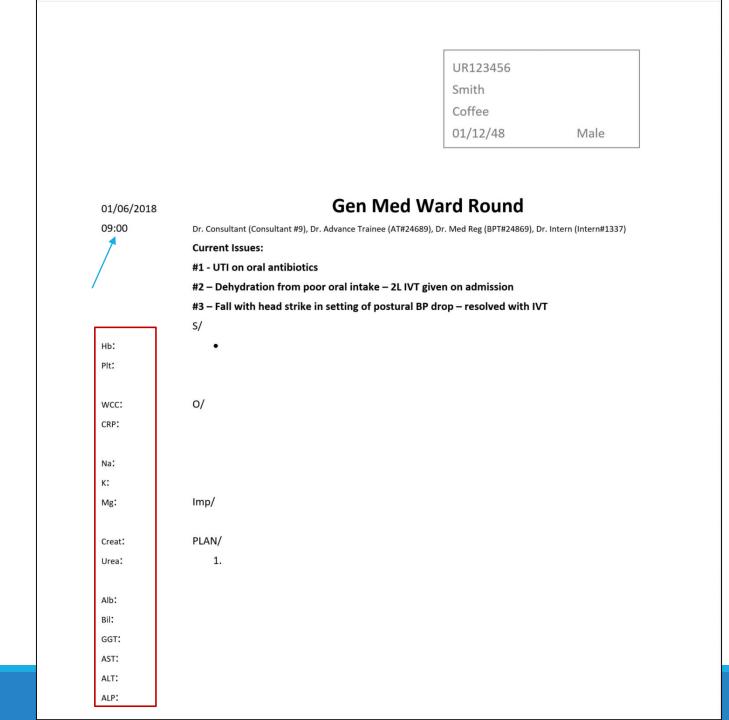
| | | Smith Coffee | |
|------------|---------------------------------------|-----------------------|----------------|
| | | 01/12/48 | Male |
| | | | |
| 01/06/2018 | Gen Med Progress S | ummary | |
| 09:00 | allied Health and Discharge Planning: | | |
| | Physio: Ongoing Review Fluids | OT: Ongoing review | |
| | Speech Path: Ward diet, Thin | Social work: N/A | |
| | ACAT: N/A Thin Profile: Mildly thick | Planned Discharge Loc | ation: Pending |
| | Presentation: | | |
| | Issues this admission: | | |
| | #1 - | | |
| | • | | |
| | #2 - | | |
| | • | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

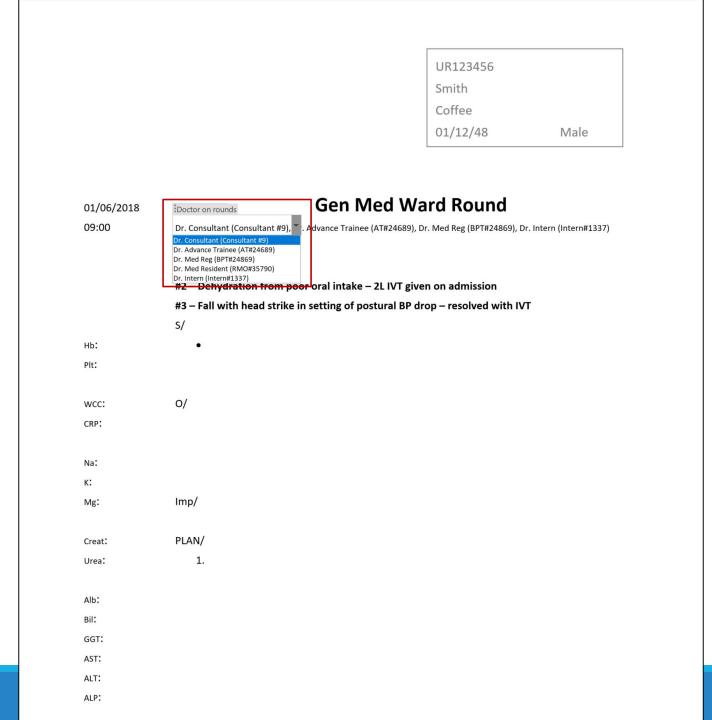
| | | UR123456 | | | |
|------------|--|-----------------------------------|-----------------------|--|--|
| | | Smith | | | |
| | | Coffee | | | |
| | | 01/12/48 | Male | | |
| | | | | | |
| | | | | | |
| 01/06/2018 | Gen Med Progress | s Summary | | | |
| 09:00 | Allied Health and Discharge Planning: | - | | | |
| | Physio: Ongoing Review | OT: Ongoing review | | | |
| | Speech Path: Ward diet, Thin | Social work: N/A | | | |
| | ACAT: N/A | Planned Discharge Loca | ation: Pending | | |
| | Profile: 70 yo male from home with wife; independent with ADLs and mobility; 7step full resus | | | | |
| | Presentation: Fall while mobilising to toil | et at 4am. Head strike on sink. C | alled out to wife who | | |
| | called SAAS. No loss of consciousness. Dizzy on postural change but no palpitations. 3 days of | | | | |
| | dysuria with poor oral intake. No fever/rigors/sweats. No chest pain/shortness of breath. | | | | |
| | Issues this admission: | | | | |
| | #1 - UTI on oral antibiotics | | | | |
| | | • | | | |
| | | | | | |
| | | 2L IVT given on admission | | | |
| | • | 2L IVT given on admission | | | |
| | • #2 – Dehydration from poor oral intake – | | | | |

| | | UR123456 | |
|----------|--|--|--|
| | | Smith | |
| | | Coffee | |
| | | 01/12/48 | Male |
| | | | |
| | | | |
| /06/2018 | Gen Med Progress | Summary | |
| :00 | Allied Health and Discharge Planning: | • | |
| | Physio: Ongoing Review | OT: Ongoing review | |
| | | | |
| | Speech Path: Ward diet, Thin | Social work: N/A | |
| | Speech Path: Ward diet, Thin ACAT: N/A | Social work: N/A Planned Discharge Loc | ation: Pending |
| | | Planned Discharge Loc | |
| | ACAT: N/A | Planned Discharge Loc independent with ADLs and mo | bility; 7step full resu |
| | ACAT: N/A Profile: 70 yo male from home with wife; | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C | bility; 7step full resu alled out to wife who |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no pa gors/sweats. No chest pain/sho | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics • MCS: E.coli – pansensitive | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no pa gors/sweats. No chest pain/sho | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics • MCS: E.coli – pansensitive • Started on Trimethoprim 300mg | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no pa gors/sweats. No chest pain/sho | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics • MCS: E.coli – pansensitive • Started on Trimethoprim 300mg • Post void residual: 50 ml | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p gors/sweats. No chest pain/sho night for 7 nights | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics MCS: E.coli – pansensitive Started on Trimethoprim 300mg Post void residual: 50 ml USS KUB: pending | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p gors/sweats. No chest pain/sho night for 7 nights | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics MCS: E.coli – pansensitive Started on Trimethoprim 300mg Post void residual: 50 ml USS KUB: pending #2 – Dehydration from poor oral intake – | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p gors/sweats. No chest pain/sho night for 7 nights | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics • MCS: E.coli – pansensitive • Started on Trimethoprim 300mg • Post void residual: 50 ml • USS KUB: pending #2 – Dehydration from poor oral intake – • 2 L IVT given in ED | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no p gors/sweats. No chest pain/sho night for 7 nights 2L IVT given on admission | bility; 7step full resu alled out to wife who alpitations. 3 days of |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics MCS: E.coli – pansensitive Started on Trimethoprim 300mg Post void residual: 50 ml USS KUB: pending #2 – Dehydration from poor oral intake – 2 L IVT given in ED Creatinine at baseline 80 | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no pa gors/sweats. No chest pain/sho night for 7 nights 2L IVT given on admission ward | bility; 7step full resu alled out to wife who alpitations. 3 days of rtness of breath. |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics • MCS: E.coli – pansensitive • Started on Trimethoprim 300mg • Post void residual: 50 ml • USS KUB: pending #2 – Dehydration from poor oral intake – • 2 L IVT given in ED • Creatinine at baseline 80 • Eating and drinking normally on | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C izzy on postural change but no p gors/sweats. No chest pain/sho night for 7 nights 2L IVT given on admission ward stural BP drop – resolved with IV | bility; 7step full resu called out to wife who alpitations. 3 days of rtness of breath. |
| | ACAT: N/A Profile: 70 yo male from home with wife; Presentation: Fall while mobilising to toil called SAAS. No loss of consciousness. Di dysuria with poor oral intake. No fever/ri Issues this admission: #1 - UTI on oral antibiotics MCS: E.coli – pansensitive Started on Trimethoprim 300mg Post void residual: 50 ml USS KUB: pending #2 – Dehydration from poor oral intake – 2 L IVT given in ED Creatinine at baseline 80 Eating and drinking normally on #3 – Fall with head strike in setting of pos | Planned Discharge Loc independent with ADLs and mo et at 4am. Head strike on sink. C zzy on postural change but no pi gors/sweats. No chest pain/sho night for 7 nights 2L IVT given on admission ward stural BP drop – resolved with IV aemic changes. Nil acute patholo | bility; 7step full resu called out to wife who alpitations. 3 days of rtness of breath. |

| | | UR123456 | | UR123456 |
|---------|---|--|------------|---|
| | | Smith | | Smith |
| | | Coffee | | Coffee |
| | | 01/12/48 Male | | 01/12/48 M |
| | | | | |
| | | | | |
| 06/2018 | Gen Med Progress | Summary | 01/06/2018 | Gen Med Ward Round |
| 00 | Allied Health and Discharge Planning: | | 09:00 | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Inte |
| | Physio: Ongoing Review | OT: Ongoing review | | Current Issues: |
| | Speech Path: Ward diet, Thin | Social work: N/A | | #1 - UTI on oral antibiotics |
| | ACAT: N/A | Planned Discharge Location: Pending | | #2 – Dehydration from poor oral intake – 2L IVT given on admission |
| | Profile: 70 yo male from home with wife; i | independent with ADLs and mobility; 7step full resus | | #3 – Fall with head strike in setting of postural BP drop – resolved with IVT |
| | Presentation: Fall while mobilising to toile | et at 4am. Head strike on sink. Called out to wife who | | S/ |
| | called SAAS. No loss of consciousness. Diz | zy on postural change but no palpitations. 3 days of | Hb: | • |
| | dysuria with poor oral intake. No fever/rig | gors/sweats. No chest pain/shortness of breath. | Plt | |
| | Issues this admission: | | | |
| | #1 - UTI on oral antibiotics | | wcc: | 0/ |
| | MCS: E.coli – pansensitive | | CRP: | |
| | Started on Trimethoprim 300mg | night for 7 nights | | |
| | Post void residual: 50 ml | | Na: | |
| | USS KUB: pending | | к: | |
| | #2 – Dehydration from poor oral intake – 2 | 2L IVT given on admission | Mg: | Imp/ |
| | • 2 L IVT given in ED | | | |
| | Creatinine at baseline 80 | | Creat: | PLAN/ |
| | Eating and drinking normally on v | ward | Urea: | 1. |
| | #3 – Fall with head strike in setting of post | tural BP drop – resolved with IVT | | |
| | CTB: moderate small vessel ischa | emic changes. Nil acute pathology. | Alb: | |
| | Postural BP drop resolved post IV | т | Bil: | |
| | • Pending physiotherapy review $ ightarrow$ | ? RITH | GGT: | |
| | | | AST: | |
| | | | ALT: | |

ALP:





| | UR123456 |
|------------|---|
| | Smith |
| | Coffee |
| | 01/12/48 Male |
| | |
| | |
| | Con Mad Mand Down d |
| 01/06/2018 | Gen Med Ward Round |
| 09:00 | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Intern#1337) |
| | Current Issues: |
| | #1 - UTI on oral antibiotics |
| | #2 – Dehydration from poor oral intake – 2L IVT given on admission |
| | #3 – Fall with head strike in setting of postural BP drop – resolved with IVT |
| | S/ |
| нь: 139 | Slept well. No new issues. Bowels open this morning. |
| Plt: 325 | No chest pain/shortness of breath |
| | Dysuria resolved |
| wcc: 10 | Eating and drinking |
| CRP: 68 | Loss of confidence regarding mobility; unwilling to mobilise without frame |
| Na: 138 | O/ Observations Stable and Afebrile, HR 80, RR 16, Sats 98% RA, T36.4C |
| к: 4.2 | BP Lying 128/64; BP Standing 132/66 |
| мg: 0.72 | Alert and oriented; JVP not elevated; moist mucous membranes |
| | Chest clear |
| Creat: 82 | Abdomen soft and non-tender |
| Urea: 7 | Calves soft and non-tender, nil peripheral oedema |
| | IV cannula insitu left cubital fossa; nil pain/erythema |
| Alb: | |
| Bil: | Imp/ Clinically improved. |
| GGT: | PLAN/ |
| | 1. Continue antibiotics - PO Trimethoprim 300mg Night (day 2/7) |
| AST: | |

| <form><form><form><form><form><form><form><form><form><form><form><form><form></form></form></form></form></form></form></form></form></form></form></form></form></form> | | | | NORTHERN ADEL | AIDE LOCAL HEALTH NETWOR | K MR 550 |
|---|------------|---|----------|----------------------------------|--------------------------|---|
| Operation Can Med Ward Round 000 0 converte framework (000 km / 000 | | Smith Coffee | | Government of South Australia | Lyell McEwin Hospital | UR No: Do not hand write these details, except when adhesive barcode Surname: |
| MAXPUT Cancender Representation MAXPUT Construction MA | | | | DATE | NOTE: ALL ENTRIES MUS | T HAVE SIGNATURE & DESIGNATION RECORDED |
| 900 b. Constant (% 0 Add not 1/2004 (% 0.0- Add (% 0.0- (% 0.0 | 01/06/2018 | Gen Med Ward Round | | | | |
| Fi-Uro of a valiability Fi-Uro da valiability Fi-Dedivation proceed valiate 1, U/T planon a datability Fi-Bit with based strike in setting of potons iB drop - resolved with VT Setting and strike in setting of potons iB drop - resolved with VT Potonsetting and strike in setting of potons iB drop - resolved with VT Potonsetting and strike in setting of potonse iB drop - resolved with VT Potonsetting and strike in setting of potonse iB drop - resolved with VT Potonsetting and strike in setting of potonse iB drop - resolved with VT Potonsetting and strike in setting of potonse iB drop - resolved with VT setting and strike in setting | | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Intern#1337) | | | | |
| 12 - Oxfordination rom poor variation 12 - Oxfordination rom poor variation 15 </td <td></td> <td>2 전 1 전 2 전 1 전 2 전 1 전 2 전 1 전 2 전 2 전</td> <td></td> <td></td> <td></td> <td></td> | | 2 전 1 전 2 전 1 전 2 전 1 전 2 전 1 전 2 전 2 전 | | | | |
| B1-Fall who dark laive is during of postural BP drop - resolved with NT. ST N:138 N:138 Observations fails and driving N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 Observations Stable and Adeving H800 spent his moniling. N:138 N:138 Observations Stable and Adeving H800 spent his moniling. N:138 N:139 </td <td></td> <td>#1 - UTI on oral antibiotics</td> <td></td> <td></td> <td></td> <td></td> | | #1 - UTI on oral antibiotics | | | | |
| S/ In 139 No chest pain/shortness flowed open this moning. In 235 No chest pain/shortness of break. In 236 In 237 In 238 O/Observation Stable and Activity. HB 00, RB 16, Sets 98% RA, T38.4C In 237 In 238 O/Observation Stable and Activity. HB 00, RB 16, Sets 98% RA, T38.4C In 237 In 238 In 239 In 239 O/Observation Stable and Activity. HB 00, RB 16, Sets 98% RA, T38.4C In 239 In | | #2 – Dehydration from poor oral intake – 2L IVT given on admission | | | | |
| In: 139 In: 139 In: 139 In: 139 In: 139 In: 139 In: 130 <li< td=""><td></td><td>#3 – Fall with head strike in setting of postural BP drop – resolved with IVT</td><td></td><td></td><td></td><td></td></li<> | | #3 – Fall with head strike in setting of postural BP drop – resolved with IVT | | | | |
| m: 325 No chest pain/ihortnes of breath Dyrun's resolved States and reinfinite Cost: 50 | | S/ | | | | |
| Dysaria resolved Acting and drinking Less for and drinking Less for and drinking Less for and drinking, HR 80, RR 16, Sats 98K RA, T36.4C Less for and drinked; KP Pot leatest; moist mucous membranes Chess Cast Ches | нь: 139 | Slept well. No new issues. Bowels open this morning. | \frown | | | |
| wc:10 • Esting and dinking cor:10 • Loss of confidence regarding mobility: unwilling to mobilise without frame Nu:138 O/Observations Stable and Athebrine, HR 80, RR 16, Sats 98%, RA, 736.4C. Wei, 27.2 A left and oriented; JVP not elevated; moist nuccous membranes Creat: 82 A hadrome stable and non-tender: Wei and usinstu left cubital fossy rul pain/erythema Ac: Image: Machine antibiotics: PD Trimethoprim 300mg Night (day 2/7): As: Image: Corriging antibiotics: PD Trimethoprim 300mg Night (day 2/7): As: Image: Corriging antibiotics: PD Trimethoprim 300mg Night (day 2/7): As: Image: Corriging antibiotics: PD Trimethoprim 300mg Night (day 2/7): Analt Disto Sto RB Image: Corriging antibiotics: PD Trimethoprim 300mg Night (day 2/7): Analt Disto Sto RB Image: Corriging antibiotics: PD Trimethoprim 300mg Night (day 2/7): Analt Disto Sto RB Image: Corriging antibiotic and provide antibiotic sto PD Trimethoprim 300mg Night (day 2/7): Image: Corriging antibiotic and provide antibiotics: PD Trimethoprim 300mg Night (day 2/7): Image: Corriging antibiotic and provide antibiotic antibiotic and provide antibiotic and provide antibiotic and provide antibiotic antibioti | Plt: 325 | No chest pain/shortness of breath | | | | |
| Mar. 0.72 Alert and oriented; JVP not elevated; moist mucous membranes Chest clear Creat: 82 Abdomen soft and non-tender Ureas: 7 Calces soft and non-tender, nil peripheral oedema W cannula instu left cubital fossa; nil pain/erythema Ale: W cannula W | | Dysuria resolved | | | | |
| Mar. 0.72 Alert and oriented; JVP not elevated; moist mucous membranes Chest clear Creat: 82 Abdomen soft and non-tender Ureas: 7 Calces soft and non-tender, nil peripheral oedema W cannula instu left cubital fossa; nil pain/erythema Ale: W cannula W | | | | | | <u>``</u> |
| Ma: 0.72 Aleft and oriented; /VP not elevated; moist mucous membranes Chest clear Creat: 82 Chest clear Creat: 82 Chest clear Creat: 82 Calves soft and non-tender W cannula insitu left cubital fossa; nil pain/erythema Air: Ni: Imp/Clinically improved. GGT: PLAN/ AST: 1. Continue artibiotics - PD Trimethoprim 300mg Night (day 2/7) AI: 2. Await physiotherapy review with thanks; re:?RTH AI: 3. A. Remove IV cannula | CRP: 68 | Loss of confidence regarding mobility; unwilling to mobilise without frame | | | | |
| Ma: 0.72 Aleft and oriented; /VP not elevated; moist mucous membranes Chest clear Creat: 82 Chest clear Creat: 82 Chest clear Creat: 82 Calves soft and non-tender W cannula insitu left cubital fossa; nil pain/erythema Air: Ni: Imp/Clinically improved. GGT: PLAN/ AST: 1. Continue artibiotics - PD Trimethoprim 300mg Night (day 2/7) AI: 2. Await physiotherapy review with thanks; re:?RTH AI: 3. A. Remove IV cannula | Na: 138 | O/ Observations Stable and Afebrile, HR 80, RR 16, Sats 98% RA, T36.4C | | | | |
| Venula instuleft cubital fossa; nil pain/erythema Image: Comparison of Comparison | | BP Lying 128/64; BP Standing 132/66 | | | | |
| Venula instuleft cubital fossa; nil pain/erythema Image: Comparison of Comparison | мg: 0.72 | Alert and oriented; JVP not elevated; moist mucous membranes | | | | Å |
| Venula instuleft cubital fossa; nil pain/erythema Image: Comparison of Comparison | | | | | | <u>S</u> |
| Venula instuleft cubital fossa; nil pain/erythema Image: Comparison of Comparison | | | | | | |
| Alb: Imp/ Clinically improved. GGT: PLAN/ Ast: 1. Continue antibiotics - PO Trimethoprim 300mg Night (day 2/7). Atr: 2. Await physiotherapy review with thanks; re: ?RiTH A.P: 3. Chase USS KUB 4. Remove IV cannula | Urea: 7 | | | | | Ĉ |
| Bil: Imp/Clinically improved. GGT: PLAN/ AT: 1. Contine antibiotics - PO Trimethoprim 300mg Night (day 2/7) ALT: 2. Await physiotherapy review with thanks; re:?RITH A.P: 3. Chase USS KUB 4. Remove IV cannula | | IV cannula insitu left cubital fossa; nil pain/erythema | | | | |
| GGT: PLAN/ AST: 1. Continue antibiotics - PO Trimethoprim 300mg Night (day 2/7) ALT: 2. Await physiotherapy review with thanks; re:?RITH ALP: 3. Chase USS KUB 4. Remove IV cannula | | | \frown | | | |
| AST: 1. Continue antibiotics - PO Trimethoprim 300mg Night (day 2/7) ALT: 2. Await physiotherapy review with thanks; re:?RITH ALP: 3. Chase USS KUB 4. Remove IV cannula | | La develación - la develación de Operatives de Constitución (| | | | |
| ALT: 2. Await physiotherapy review with thanks; re:?RITH ALP: 3. Chase USS KUB 4. Remove IV cannula — 9. Remove IV cannula —< | | | | | | |
| ALP: 3. Chase USS KUB 4. Remove IV cannula | | | | | | |
| 4. Remove IV cannula Image: Constraint of the second o | | | | | | |
| | ALP. | | | | | |
| | | | | | | |
| | | | | | | |
| | | | 20 | | | |
| MR 550 | | | | | | |
| ABEZ 4000000000000000000000000000000000000 | | | + 20+ | | | |
| All control co | | | | 5 | 6 | |
| AR 250 MR | | | 1 0110 | | | |
| | | | oloto' | | | |
| | | | , | | | |
| | | | 1014 | | | |
| | | | 1 OS/ | | | |
| | | | ouico. | | | |

| ADUTER | Lyell McEwin Hospital | UR No: | UR123456 | |
|----------------------------------|---|-------------------------|--|-----|
| CONTRACTOR OF | Oliniaal | Do not hand Surname: | write these details, <u>except when</u> adhesive bard Smith | ode |
| Government of South Australia | Clinical | First Name: | Coffee | |
| SA Health | Record | D.O.B | 01/12/48 Male | _ |
| DATE | NOTE: ALL ENTRIES MU | IST HAVE SIGN | ATURE & DESIGNATION RECORDED | |
| 01/06/2018 | Ger | n Med Wa | rd Round | |
| 09:00 | Dr. Consultant (Consultant #9), Dr. Advance 1 | rainee (AT#24689), D | r. Med Reg (BPT#24869), Dr. Intern (Intern#1337) | |
| | Current Issues: | | | |
| | #1 - UTI on oral antibiotics | | | |
| | #2 – Dehydration from poor oral in | | | |
| | #3 – Fall with head strike in setting | of postural BP dr | op – resolved with IVT | |
| | S/ | | | |
| нь: 139 | Slept well. No new issues. I | | morning. | |
| Plt: 325 | No chest pain/shortness of | breath | | |
| | Dysuria resolved | | | |
| wcc: 10 | Eating and drinking | | | |
| CRP: 68 | Loss of confidence regarding | ng mobility; unwil | ling to mobilise without frame | |
| Na: 138 | O/ Observations Stable and Afebrile | , HR 80, RR 16, Sa | ats 98% RA, T36.4C | |
| к: 4.2 | BP Lying 128/64; BP Standing 132/6 | 6 | | |
| Mg: 0.72 | Alert and oriented; JVP not elevated | d; moist mucous r | nembranes | |
| | Chest clear | | | |
| Creat: 82 | Abdomen soft and non-tender | | | |
| Urea: 7 | Calves soft and non-tender, nil peri | | | |
| | IV cannula insitu left cubital fossa; r | nil pain/erythema | | |
| Alb: | | | | |
| Bil: | Imp/ Clinically improved. | | | |
| GGT: | PLAN/ | wine ath a paring 200 | mg Night $(d_{2}v, 2/7)$ | |
| AST: | Continue antibiotics - PO T Await physiotherapy revie | | | |
| ALT: | 2. Await physiotherapy revie 3. Chase USS KUB | w with thanks, re | | |
| ALP: | 4. Remove IV cannula | | | |
| | | | | |
| | | < | ígnature | |
| | | \sim | | _ |
| | | | Dr. Intern | |
| | | | | |
| | | | | |

| UR123456 | |
|----------|------|
| Smith | |
| Coffee | |
| 01/12/48 | Male |

01/06/2018

Gen Med Progress Summary

09:00

| lied Health and Discharge Planning: | |
|-------------------------------------|--|
|-------------------------------------|--|

| Physio: Ongoing Review | OT: Ongoing review |
|------------------------------|-------------------------------------|
| Speech Path: Ward diet, Thin | Social work: N/A |
| ACAT: N/A | Planned Discharge Location: Pending |

Profile: 70 yo male from home with wife; independent with ADLs and mobility; 7step full resus Presentation: Fall while mobilising to toilet at 4am. Head strike on sink. Called out to wife who called SAAS. No loss of consciousness. Dizzy on postural change but no palpitations. 3 days of dysuria with poor oral intake. No fever/rigors/sweats. No chest pain/shortness of breath. Issues this admission:

#1 - UTI on oral antibiotics

- MCS: E.coli pansensitive
- Started on Trimethoprim 300mg night for 7 nights
- Post void residual: 50 ml
- USS KUB: pending
- #2 Dehydration from poor oral intake 2L IVT given on admission
 - 2 L IVT given in ED
 - Creatinine at baseline 80
 - Eating and drinking normally on ward
- #3 Fall with head strike in setting of postural BP drop resolved with IVT
 - CTB: moderate small vessel ischaemic changes. Nil acute pathology.
 - Postural BP drop resolved post IVT
 - Pending physiotherapy review → ? RiTH

| UR123456 | |
|----------|------|
| Smith | |
| Coffee | |
| 01/12/48 | Male |

| 01/06/2018 | Gen Med Ward Round |
|------------|---|
| 09:00 | Dr. Consultant (Consultant #9), Dr. Advance Trainee (AT#24689), Dr. Med Reg (BPT#24869), Dr. Intern (Intern#1337) |
| | Current Issues: |
| | #1 - UTI on oral antibiotics |
| | #2 – Dehydration from poor oral intake – 2L IVT given on admission |
| | #3 – Fall with head strike in setting of postural BP drop – resolved with IVT |
| | s/ |
| нь: 139 | Slept well. No new issues. Bowels open this morning. |
| Plt: 325 | No chest pain/shortness of breath |
| | Dysuria resolved |
| wcc: 10 | Eating and drinking |
| CRP: 68 | Loss of confidence regarding mobility; unwilling to mobilise without frame |
| Na: 138 | O/ Observations Stable and Afebrile, HR 80, RR 16, Sats 98% RA, T36.4C |
| к: 4.2 | BP Lying 128/64; BP Standing 132/66 |
| мg: 0.72 | Alert and oriented; JVP not elevated; moist mucous membranes |
| | Chest clear |
| Creat: 82 | Abdomen soft and non-tender |
| Urea: 7 | Calves soft and non-tender, nil peripheral oedema |
| | IV cannula insitu left cubital fossa; nil pain/erythema |
| Alb: | |
| ви: | Imp/ Clinically improved. |
| GGT: | PLAN/ |
| AST: | 1. Continue antibiotics - PO Trimethoprim 300mg Night (day 2/7) |
| ALT: | 2. Await physiotherapy review with thanks; re:?RiTH |
| ALP: | 3. Chase USS KUB |
| | |

4. Remove IV cannula

○ Waiting for oacis.had.sa.go... ×



| UR123456 | |
|----------|------|
| Smith | |
| Coffee | |
| 01/12/48 | Male |

Gen Med Progress Summary

09:00

01/06/2018

| Allied Health and Discharge Planning: | | | |
|---------------------------------------|--|--|--|
| Physio: Ongoing Review | OT: Ongoing review | | |
| Speech Path: Ward diet, Thin | Social work: N/A | | |
| ACAT: N/A | Planned Discharge Location: Pending | | |
| | riannea Biosnarge Zosationn Ferraingin | | |

Profile: 70 yo male from home with wife; independent with ADLs and mobility; 7step full resus Presentation: Fall while mobilising to toilet at 4am. Head strike on sink. Called out to wife who called SAAS. No loss of consciousness. Dizzy on postural change but no palpitations. 3 days of dysuria with poor oral intake. No fever/rigors/sweats. No chest pain/shortness of breath. Issues this admission:

#1 - UTI on oral antibiotics

- MCS: E.coli pansensitive
- Started on Trimethoprim 300mg night for 7 nights
- Post void residual: 50 ml
- USS KUB: pending
- #2 Dehydration from poor oral intake 2L IVT given on admission
 - 2 L IVT given in ED
 - Creatinine at baseline 80
 - Eating and drinking normally on ward

#3 – Fall with head strike in setting of postural BP drop – resolved with IVT

- CTB: moderate small vessel ischaemic changes. Nil acute pathology.
- Postural BP drop resolved post IVT
- Pending physiotherapy review → ? RiTH

| VOACIS | | | | | | X |
|---|--|--|---------------------------|------------------------|------------------------|---|
| e <u>R</u> oster <u>L</u> ist RTS R <u>e</u> port | <u>U</u> ser T <u>o</u> ols | | | | | |
| | 1 😪 🔺 🕹 | | ? | | | |
| | | | • | | | |
| eparation Summary - Data Entry | <u></u> | | | | | |
| | | | | | | |
| inical Synopsis Investigations | s Management Plan | Separation Notes | Distribution History | Amendment Reason | | |
| Summary | Patient D | Details | Proble | em List | Procedures | |
| Clinical Synopsis: | | | | | | |
| Profile: 70 yo male from home wi Presentation: Fall while mobilisir palpitations. 3 days of dysuria wi Issues this admission: #1 - UTI on oral Antibiotics •MCS: E.coli - <u>pansensitive</u> . •Started on Trimethoprim 300 m •Post void residual: 50 ml •USS KUB: pending #2 - Dehydration from poor oral i •2 L, IVT given in ED •Creat baseline 80 •Eating and drinking normally on #3 - Fall with head strike in settir •CTB: moderate small vessel iso •Postural BP drop resolved post •Pending physio review | ing to toilet at <u>dam</u> , Head s ith poor oral intake. No fev ng night for 7 nights intake - 2 L IVT given on a n ward ng of postural BP drop - re schaemic changes. Nil act | strike on sink. Called o ver/rigors/sweats. No cl admission resolved with IVT | out to wife who called SA | WS. No LOC. Dizzy on p | bostural change but no | |



Workstation on Wheels "WOW"

Or

Computer on Wheels





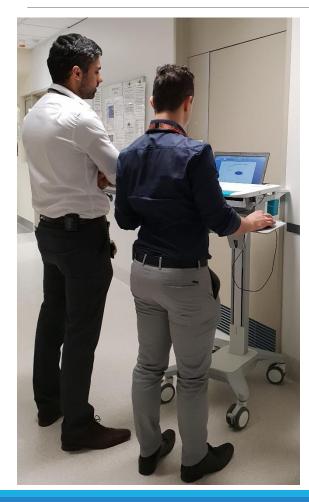
Confidentiality

•Uses hospital IT network, and therefore its cyber security

- Restricted access folder
 - Requires personal login to computer
 - Requires departmental permission for IT to grant access
- Deletion of soft copies
 - Computer templates are deleted upon discharge summary completion
- Records are only kept in paper form in clinical files
- Access permits are time restricted to the period of your rotation on the medical team



Pilot interventional study



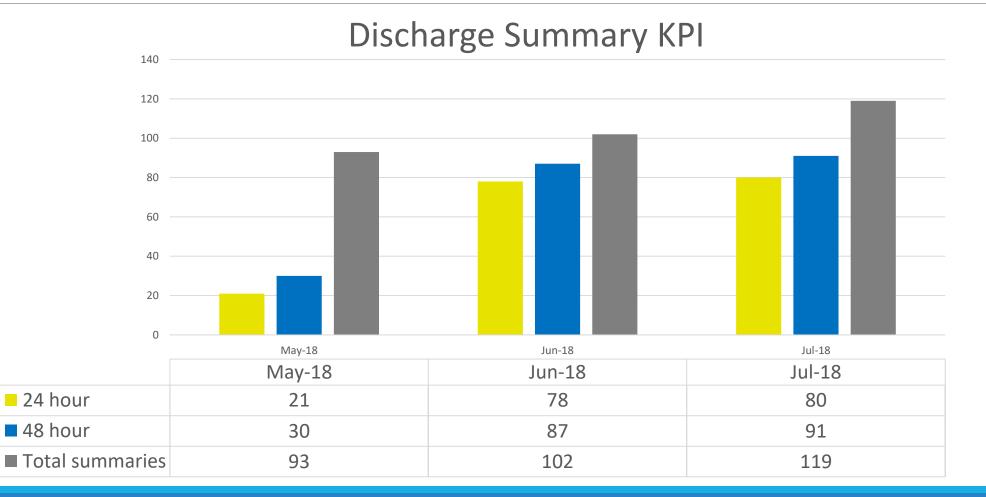
Pre-intervention month: May 2018

Intervention months: June and July 2018

General Medical Ward, Lyell McEwin Hospital



<u>Results:</u> Pre-post intervention data comparison



Computer Note Feedback from Ward 1D Nurses

- I noticed them and I can read and understand so much better.
- I love them, for a few reasons

I can read the plan clearly, Doctor writing is hard to read at times not now I like how after they review each pod you know the plan so as bed side nurse you can go read all plans in your pod at once. The only thing is if they make changes from their original note they need to update them not just tell us on the floor 🗐 I like them

Love them.

Well set out. Easy to read - hallelujah!!

Shame it wastes the page before it is printed on. Can't have everything 😵

Where to from here?

Inclusion of admission process into the template

Inclusion of medication charts

Stepping stone to EPAS arrival

| Date 4/07/18 | Medicine (print generic name) Escitalopram | Tick if slow release |
|------------------------|---|--|
| Route Oral | Dose Frequency and NOV 10mg D | W enter times all all all all all all all all all al |
| Indication Depressi | on Pharmacy | |
| Prescriber s | signature Print your name | C. 41333999 |
| Date 4/07/18 | Medicine (print generič name) Multivitamin | Tick if slow release |
| Route Oral | Dose Frequency and NOV 1 tab D | W enter times |
| Indication Supplem | Pharmacy | EVANDLE |
| Prescriber s | signature Print your name | EXAMI |

Conclusion:

Electronic medical records in a Word document

This pilot intervention was a successful proof of concept

Cost of our intervention

- Conception and creation of the template = \$0
- Hospital infrastructure integration = \$0
- Implementation with minimal staff retraining = \$0
- ~20 sheets of paper to get proper alignment and printing orientation = \$2.00
- Average cost of 1 cup of coffee in Adelaide = \$3.50

It is possible to attain the benefits of EMR for minimum cost

References

Victorian Department of Health (2012). 'Electronic medical record benefits: A literature review.' *Victorian Department of Health.*

Schuler, R. (2010). 'The smart grid: a bridge between emerging technologies society and the environment.' *The Bridge*, *40*(1), 42-49.

Hegney, D., Buikstra, E., Eley, R., Fallon, A. B., Gilmore, V., & Soar, J. (2007). 'Nurses and information technology.' *Australia Nursing Federation.*

Lisby, M., Nielsen, L. P., & Mainz, J. (2005). 'Errors in the medication process: frequency, type, and potential clinical consequences.' *International Journal for Quality in Health Care*, *17*(1), 15-22.

Hopper K. & Jacobs P.(2009). 'Halting the sepsis cascade.' The Cerner Quarterly, 5 (1): 15–23.

Rotter, T., Kinsman, L., James, E., Machotta, A., Gothe, H., Willis, J., ... & Kugler, J. (2010). 'Clinical pathways: effects on professional practice, patient outcomes, length of stay and hospital costs.' *Cochrane Database of Systematic Reviews*, (3), CD006632-1.

Murphy, E. M., Oxencis, C. J., Klauck, J. A., Meyer, D. A., & Zimmerman, J. M. (2009). 'Medication reconciliation at an academic medical center: implementation of a comprehensive program from admission to discharge.' *American Journal of Health-System Pharmacy*, *66*(23), 2126-2131.

South Australia Health (2018). 'Consultation Paper on the Independent Review of South Australia's Enterprise Patient Administration System.' Accessed Nov 2018 <www.sahealth.sa.gov.au>

Thank you