# Further enhancing care at home – a community point of care testing (POCT) service

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### MEC (Mon/Anglesey enhanced care at home team) Mission Statement:

Multidisciplinary assessment to enhance the care given to frail elderly patients, with highly complex clinical conditions and multiple co-morbidities who would have otherwise required medical admission to hospital. Supporting frail elderly people to remain in their own environment, bringing the hospital to their home.

### The Team around the Patient

**MEC**
ANPs (Advanced nurse practitioner)
COTE (Care of the Elderley Consultant)
APs (advanced practitioner/HCA)
GPs
APP (Advanced Paramedic Practitioner)

**POCT/Blood Sciences**
Biochemist
POCT Higher support worker
POCT BMS

## INTRODUCTION

- **Healthcare reviews are driving trends in shifting patient care out of the District General hospital (DGH) and into the community**
- **There is emphasis on improvement in chronic disease management, focus on patient centred care and promotion of innovations and new technology**
- **POCT provides an ideal platform to support these improvements, however, evidence of how POCT will improve patient pathways and potential outcome benefits should be investigated before implementation**
- **Quality is at the heart of these changes**
- **BCUHB, Ysbyty Gwynedd covers a large rural area with Pathology access barriers due to transport distances**
- **Blood Sciences and MEC team collaborated on a successful pilot study completed in 2015, which remains sustainable**

## AIMS

- **To develop and innovative POCT service to support care closer to home**
- **To review patient outcome, admissions, cost, impact on patient care pathways and POCT role development in new pathways**

## METHOD

- **6 month pilot (2015)**

**5 phases of the project**

**Assessment and planning**

↓ Visits to Community team - observe, listen, attend virtual ward rounds

**Technical evaluation /Instrument selection**

↓ Procurement, scoring selection criteria (*i*STAT selected), validation against laboratory analyser, demonstration sessions for hands on testing and feedback with laboratory and MEC team

**Implementation**

↓ Comparison with paired laboratory sample results

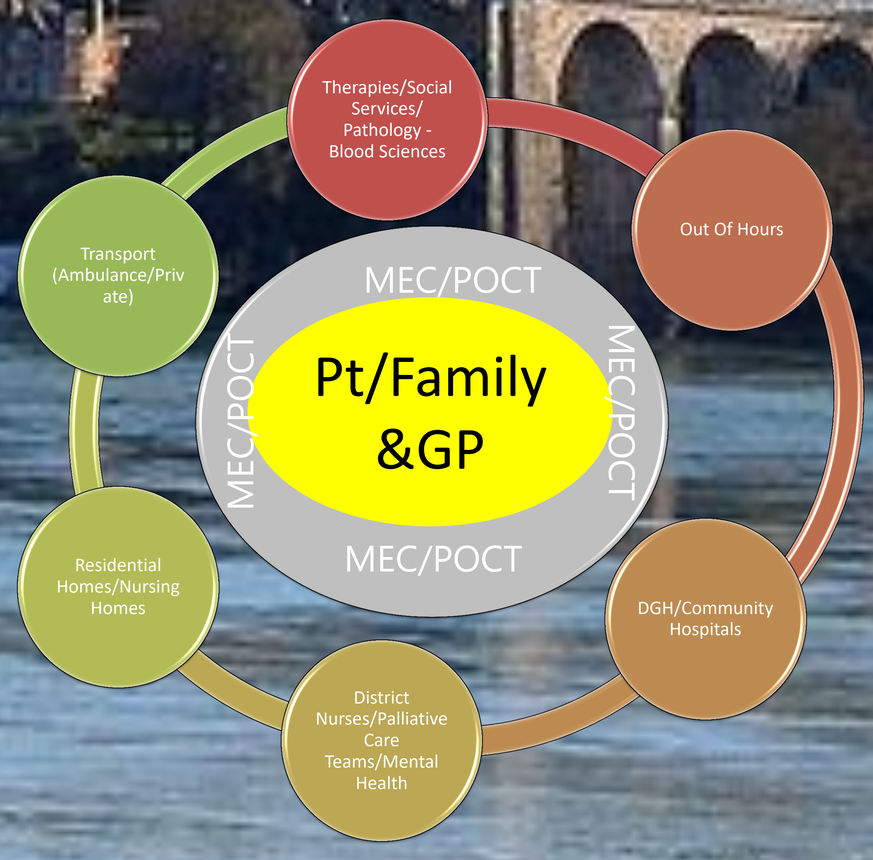
**Monitoring Utilization and Quality**

↓ All Wales POCT Policy – training, competency, QC (IQC,EQA), audit, Clinical interpretation/advice, user questionnaires

**Operational impact**

Patient outcomes, interventions, admissions (case notes),
cost analysis (episode of care (MEC vs equivalent in-patient episode), estimated POCT costs

- **Costs - Laboratory costs included tests, transport of samples to laboratory (based on home postcode) and staff time. POCT costs included analyser, reagent, staff time and POCT team support.**




## RESULTS

- **Clinical need was established with optimum emergency testing**
- **Emergency snapshot profile – Renal function, Glucose, Haematocrit /Haemoglobin**
- **Figure 1 Demographics of patients referred to MEC – 48% were 85 years or older**
- **Figure 2 Recorded Co-morbidities of MEC Patients – Multiple co-morbidities were recorded in this complex group of patients**
- **Figure 3 Patient Outcome – The majority of patients referred to MEC remained at home, 2015 (68%) and this remains the case 2019 (82%)**
- **Figure 4 Patient Interventions resulting from POCT – Rule out/reassurance provided in 50% of cases. Allowed instant medication management (especially diuretics) in 35% of cases and fluid management (hyponatraemia and dehydration) in 9% of cases allowing administration of S/C fluids**
- **Bilingual User questionnaire (return rate 74%) concluded POCT had an impact on patient care in 88% of cases**
- **Cost analysis estimated annual transport and staff time savings of £8000, potentially covering POCT service cost for a community team**

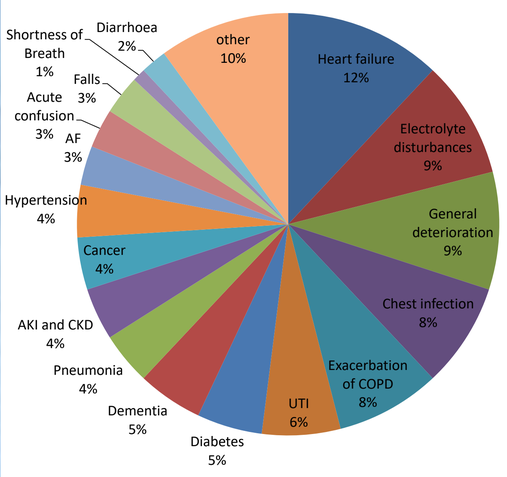
### Figure 1 Demographics of patients referred to MEC

**6 month pilot project 2015, n= 134**

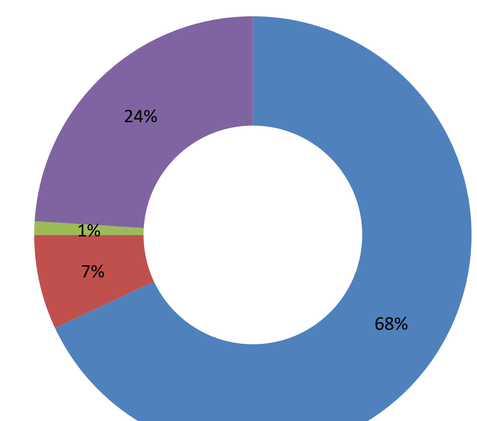
**Ynys Mon/Anglesey population is 71,000**

| | |
|---|---|
| **Mean age** | **83 years (range 48-99)** |
| **≥75years** | **87%** |
| **≥85years** | **48%** |
| **Gender** | **F 59%, M 41%** |

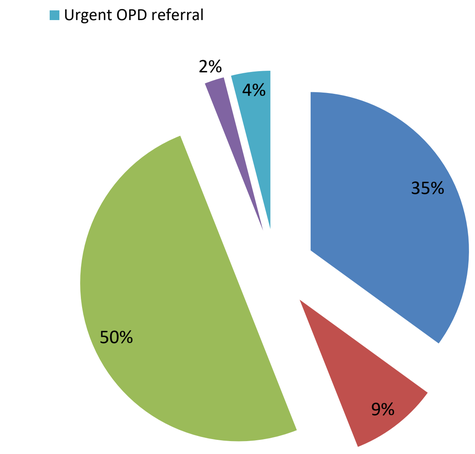
### Figure 2 Recorded Co-morbidities of MEC patients n=134




### Figure 3 Patient Outcome




### Figure 4 Patient Interventions resulting from POCT




**(n=82, 91 patients cared for at home, 9 patients did not have POCT)**

## DISCUSSION

- **Challenges - continual transition of community services – premises, staff, teams**
  **- funding approval across traditional boundaries to support new POCT models**
- **POCT team support ensured quality standards maintained as recommended in All Wales policy**
- **Flexible training and education sessions addressed any operator issues**
- **Identified savings per case of £3019 (2015)[1] and £4376 (2019) for MEC compared to equivalent inpatient episode. Total estimated savings to BCUHB in 2018/19 were £1,002,104**

## CONCLUSION

- **POCT technology itself will not deliver improved patient outcomes or quality care closer to home**
- **Collaboration between Enhanced Care at home team, Blood Sciences/diagnostics and investment in new POCT models, provides high quality, cost effective care centred around patients**
- **Future steps involve connectivity of community POCT devices to the electronic patient record via the laboratory information management systems (LIMS) and extending the enhanced care at home POCT model across the Health Board**

**References:**

(1) Evaluation of enhanced care: Professor Rhiannon Tudur Edwards (2014)., The commonwealth fund, Harkness Alumni Health policy forums, Washington DC, July 2014.