

# Implementation of an Online Microbiology Referral Pathway In a Hospital Trust - A Quality Improvement Report

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## Background and Aims

- Our objectives are:
- To ensure patient care is compliant with diagnostic stewardship at regional level - by implementing an online non-urgent Microbiology referral pathway for the hospital catchment population (~4.4 million)
  - To use plan-do-study-act (PDSA) cycles to
    - o To provide advice on all urgent referrals within 1 hour<sup>1</sup>.
    - o To improve efficiency with phoned referrals<sup>2</sup>.
  - Design a questionnaire for end-users of online referral for awareness, education and engagement

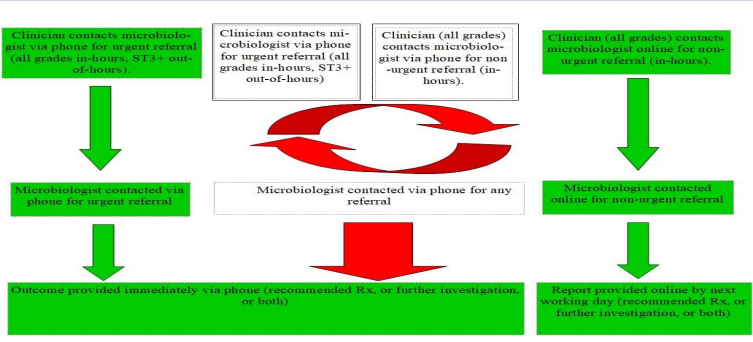
## Measurements of Improvement

- Both urgent and non-urgent referrals
- Achievement of desired outcome advice provided - antimicrobial or further investigation or both.
  - Were there repeated phone calls needed for contact?
- Urgent Referrals
- Adherence to RCPATH key performance indicator 6.3 - advice provided within 1 hour?
- Non-urgent referrals
- All systems considered when undertaking antimicrobial decision

## Tests of Change

- PDSA cycles 1 and 2
  - o 2020 - urgent (n=23) and non-urgent (n=25)
  - o May to June 2021- urgent (n=25) and non-urgent (n=25)
  - o Characteristics - all age groups, male and female
  - o Data collection - online laboratory diagnostic reporting systems, retrospective
  - o Case selection - random, by Microbiology secretaries
- PDSA cycle 3
  - o Post-Intervention - anonymous survey of quantitative and qualitative questions - all clinicians

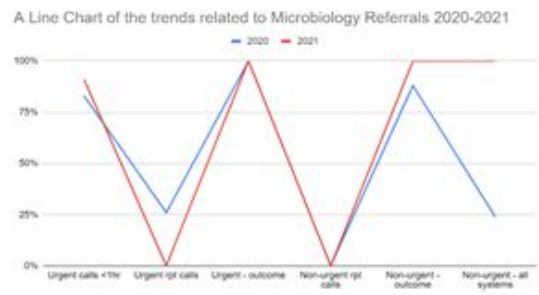
## Process Map



## Intervention

- Is urgent advice needed? Yes/ no
  - Presenting complaint: scroll down menu, includes 'other' for free type answer.
  - Duration of symptoms
  - Start date of symptoms
  - Recent antibiotic treatment - please state start/ stop date
  - Antibiotic allergies - name and allergy/ reaction type
  - Relevant occupational history
  - Past medical history
  - Past surgical history (past surgical procedures)
  - Does the patient have any prosthetic devices in-situ including long lines? Please give details
  - Intravenous drug use - yes/ no
- (If Applicable)
- Foreign travel within the last three months
  - Dates of travel from and to UK
  - Countries visited – urban/ rural environments
  - Any unusual recreational activities/ food
  - Malaria prophylaxis - yes/ no
  - Had vaccinations advice for travel area yes/ no/ n/a
  - Please detail if the patient had any contact with animals in relation to their symptoms (domestic or wild)
  - Sexual history (number/ gender of partners in the last year, type(s) of sexual intercourse, barrier methods)
  - Clinical impression/ differential diagnosis
  - What information do you need (please be specific and give timeframes for us to respond to you) \*Blue - Mandatory questions

## Results



- ### Questionnaire Results from PDSA 3 (n=19)
- o 84% reported confidence in taking a microbiology history
  - o 52% were aware of protocol
  - o 68% agreed it would change their practice
  - o 63% find pathway user-friendly
  - o 89% preferred online method

## Conclusions

- Consider implementing recurrent PDSA cycles responding to clinician feedback on pathway to
- Compile a run chart
  - Promote sustainability and expand to primary care
  - Address regional antimicrobial resistance in the long term

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## References

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