### Evaluation of Al-Enhanced Triage in Primary Care

COMPARATIVE INSIGHTS OF RAPIDHEALTH AND VISIBA WITH MENTION OF KLINIK-

DR. OSAMA SUWAR, GP REGISTRAR AND CLINICAL AI FELLOW



## The Growing Need for AI Support in Primary Care

Rising patient demand up 9% from 2023

Increasing clinician workload

 

Al-Improving access with high demand

Improving access with high demand

➢ Role of AI in improving triage



## Overview of RapidHealth, Visiba, and Klinik

RapidHealth: EMIS/SystmOne integrated, flexible, customisable for different triage needs.

Visiba: Clinician-led triage, strong for urgent cases, mainly used by larger practices.

Klinik: Primarily non-urgent triage, streamlined for low clinician involvement. Rapid**Health** 







#### RapidHealth Triage Model

#### **Customisable Rule-Based Logic**:

Pathways and decision-making customisable to meet practice needs, no machine learning

Data Security: Patient information stored securely within EMIS/SystmOne; NHS-approved, encrypted storage

Automated triage with clinician oversight option

					Slot m	nappings		
Pathway	Description	Est, demand Tier		RED	RED AMBER YELLOW GREEN			
General	General history	22.78%	Primary	GP F2F	GP F2F	ANP PHONE	ANP PHONE	
	,		Secondary	ANP F2F	ANP F2F	GP PHONE	GP PHONE	
MSK	Muscle strains, back pain, and other joint problems including injuries	11.42%	Primary	GP F2F	tel ANP	TELE ANP	TELE ANP	
			Secondary	GP PHONE	GP PHONE	GP PHONE	GP PHONE	
ENT	Mouth, throat, neck, voice and nose problems, including colds and flu	7.27%	Primary	ANP F2F	ANP F2F	ANP F2F	ANP PHONE	
			Secondary	GP F2F	GP F2F	ANP PHONE	INBOX	
Cardiopulmonary	Breathing problems, coughs, COPD, COVID-19 and asthma	7.26%	Primary	ANP F2F	ANP F2F	ANP PHONE	ANP PHONE	
			Secondary	GP F2F	GP F2F	GP PHONE	GP PHONE	
Mental Health	Mental health, feeling sad, depressed or anxious	7.08%	Primary	INBOX	INBOX	GP PHONE	GP PHONE	MH triaged by staff
			Secondary	INBOX	INBOX			
Abdominal Problems	Abdominal pain (stomach, side or back pain), nausea, vomiting or diarrhoea	5.58%	Primary	GP F2F	GP F2F	ANP F2F	ANP F2F	
			Secondary	ANP F2F	ANP F2F	GP F2F	GP F2F	
Skin (Rash)	Skin issues where you see a rash (or similar), or bites and stings	5.30%	Primary	GP F2F	GP F2F	ANP F2F	ANP F2F	
			Secondary	ANP F2F	ANP F2F	GP F2F	ANP PHONE	
Ear	Ear pain, ear discharge, hearing loss, ringing in your ears, dizziness or vertig	4.35%	Primary	ANP F2F	ANP F2F	INBOX	INBOX	To allow referral to Pharmacy first or acute hub
			Secondary	GP PHONE	GP F2F	INBOX	INBOX	
STI (Female)	Women's health: infections in the vagina and surrounding area	3.25%	Primary	GP F2F	GP F2F	GP F2F	ANP F2F	
			Secondary	GP PHONE	GP PHONE	ANP F2F	GP PHONE	
Women's Health	Women's health: general pelvic health matters	2.73%	Primary	GP F2F	GP F2F	ANP F2F	ANP F2F	
			Secondary	GP PHONE	GP PHONE	ANP PHONE	ANP PHONE	
Skin (No rash)	Skin problems (no rash) including cellulitis, sweating or nail problems	2.71%	Primary	ANP F2F	ANP F2F	ANP F2F	ANP F2F	
			Secondary	GP F2F	GP PHONE	ANP PHONE	ANP PHONE	
Cardiovascular	Chest pain, DVT and circulation. Includes unusual sensations in the chest	2.07%	Primary	GP F2F	GP F2F	ANP F2F	ANP F2F	
			Secondary	GP PHONE	ANP F2F	GP F2F	GP PHONE	
Headache	Headaches: all types	1.99%	Primary	ANP F2F	GP F2F	ANP F2F	ANP PHONE	
			Secondary	GP F2F	ANP F2F	ANP PHONE	GP PHONE	
Women's Contraception	Women's health: contraception	1.76%	Primary	GP PHONE	GP PHONE	GP PHONE	GP PHONE	
			Secondary	GP F2F	GP F2F	INBOX	INBOX	
Men's Health	Men's health: general pelvic health issues including UTIs	1.50%	Primary	GP F2F	GP F2F	GP F2F	ANP F2F	
			Secondary	GP PHONE	GP PHONE	ANP F2F	ANP PHONE	
Periods	Women's health: period concerns, including heavy, painful, irregular and late	1.46%	Primary	GP PHONE	GP PHONE	ANP PHONE	ANP F2F	
			Secondary	GP F2F	ANP PHONE	GP PHONE	ANP PHONE	
Acid Reflux	Acid reflux. Also known as heartburn, GERD and GORD	1.44%	Primary	GP F2F	GP F2F	ANP F2F	ANP F2F	
			Secondary	ANP PHONE	ANP F2F	ANP PHONE	ANP PHONE	
Breast (Female)	Women's health: breast problems and concerns	1.41%	Primary	GP F2F	GP F2F	GP F2F	GP F2F	
			Secondary	ANP F2F	ANP F2F	ANP F2F	ANP F2F	
Eye	Eye problems, vision problems and eye injuries	1.22%	Primary	GP F2F	GP F2F	GP F2F	ANP F2F	
			Secondary	ANP F2F	ANP F2F	ANP F2F	ANP PHONE	
Sinusitis	Sinus pain, sinusitis and facial pain	1.14%	Primary	ANP F2F	ANP F2F	INBOX	INBOX	



### RapidHealth: Smart Triage Case Study

THE GROVES PRACTICE





#### Reduction in Wait Times

>73% reduction in routine wait times

Enhanced patient access to care

Decrease in time-to-triage

#### <u>Time from requesting care to attending a</u> <u>pre-bookable appointment</u>





#### Reduction in Same-Day Demand

➤ 32% reduction in same-day appointment requests

Improved distribution of patient demand across the week

Allows for better management of urgent vs. non-urgent cases





# Increasing Clinician Capacity and Appointment Availability

- ≻8% increase in total appointments, despite 15-minute slot adjustments
- Better use of healthcare professionals at The Groves Practice
- Adapted to BMA 15-minute GP appointment recommendation to manage GP workload





### Staff Satisfaction and Usability of Rapid Health's Smart Triage

➤ 30% increase in staff satisfaction with Smart Triage

≻57% of staff found Smart Triage easy to use vs. 25% for the previous system

≻56% of staff could access needed information more effectively with Smart Triage





# Patient Satisfaction and Care Experience with Rapid Health's Smart Triage

> Overall Patient Satisfaction: High levels pre-implementation (93%) and post-implementation (89%)

Usability Feedback: 73% found Rapid easier to use than the previous pathway.

Reduced Stress: 65% agreed that submitting requests was less stressful than the previous pathway.





### Addressing Perceived Patient Adaptation Challenges

Initial hesitation, particularly among perceptions of impact on elderly patients

Dedicated support staff for patient guidance

High adaptation rates over time with minimal issues





#### Visiba's Overview and Modified Manchester Triage System

Modified Manchester Triage Scale

Logic-Based System: Structured, rulebased algorithm, no machine learning

Clinician oversight remains essential

Data Security: NHS-compliant, encrypted data storage





### Visiba Case Study -

NHS PRIMARY CARE PARTNERSHIP 12,000 PATIENTS





### Impact of Visiba on Appointment Scheduling Efficiency

Reduction in appointment overruns

- Improved accuracy in patient scheduling
- Enhanced clinician time management





## Patient and Clinician Satisfaction with Visiba

High patient satisfaction with triage accuracy

Reduced clinician workload stress

High trust levels in Al-driven triage





### Patient Safety and Emergency Follow-Ups

- Reduction in emergency follow-up needs- 26.7% vs 44% nationally (n=336)
- High accuracy in triage outcomes 95.82% clinician agreement in triage
- Clinician trust and satisfaction with triage effectiveness





### Addressing Common Implementation Challenges

- Initial perceived hesitation among patients
- Staff training requirements for Al tools
- High adaptation rates following initial setup





### Key Benefits and Summary of Al-Enhanced Triage

- Improved patient access and reduced wait times
- Lower clinician workload and burnout
- Enhanced satisfaction for both patients and clinicians
- Rule based algorithms based predetermined pathways- no machine learning





# Future Directions and Next Steps for Al Triage in Primary Care

- Continuous integration of patient and clinician feedback
- Ongoing development to meet emerging healthcare needs
- Focus on vulnerable patient groups and accessibility





#### Q&A and Contacts

Dr Osama Suwar – GP Registrar- Clinical AI Fellow –

linkedin.com/in/osama-suwar-health

osama.suwar3@nhs.net

Jenny Partridge- Innovation Manager-Primary care

jenny.partridge@nhs.net

George Anibaba- Senior Innovation Manager (Digital, Data & AI)

george.anibaba@nhs.net

