Identifying Neonatal Jaundice in black and brown babies:

**BACKGROUND**

Jaundice is a yellow colouration of the skin and sclerae (whites of the eyes) caused by the accumulation of bilirubin, a bile pigment that is mainly produced from the breakdown of red blood cells. It can be difficult to identify jaundice in darker skinned babies.

**AIMS + METHODS**

1) Research - To identify whether mortality as a consequence of kernicterus is higher in black and brown babies compared to white babies.

**METHODS**

1. I conducted a literature search using pubmed, google scholar, medscape, NICECKS, NHS choices, UHL trust guidelines and various paediatric journals. Key words included: kernicterus, hyperbilirubinemia, black neonates, ethnic minority neonates/babies, paediatric kernicterus.

2. I reviewed the current content of the workbook to see if there was any information on difficulties in identifying jaundice in darker skinned babies.

3. I spoke with healthcare professionals to get an insight into how they approached darker skinned babies during a jaundice assessment.

**LITERATURE RESULTS**

- The literature showed that kernicterus proportionally affects a significant number of black and ethnic minority neonates.

- Infants of ethnic minority origin may be vulnerable for two reasons: first, clinical evaluation of the severity of jaundice may be difficult and second, some ethnic minority groups have a high prevalence of haemolytic diseases such as glucose 6-phosphate dehydrogenase deficiency.

- A study recently reviewed in 2020 showed that black neonates account for more than 25% of kernicterus cases in the US, despite making up only approximately 14% of all births.

- Outcomes from discussing with healthcare professionals showed that there is a gap when it comes to confidence in examining black neonates for jaundice.

- The reason as to why black and brown babies develop kernicterus in higher proportions than their white counterparts is unknown and more research into area is necessary.

- Having scratched the surface of this literature search it was clear that more needed to be investigated with regards to why black and brown neonates were getting kernicterus so disproportionately.

**NEONATAL JAUNDICE**

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**OUTCOMES**

Outcomes from discussing with healthcare professionals showed that there is a gap when it comes to confidence in examining black neonates for jaundice.

**PROJECT OUTPUTS**

1. **Identify other gaps** - Jaundice is not the only condition that needs highlighting. There are a range of clinical conditions and situations that affect ethnic minority groups that we are not equipped to manage.

2. **Question Checklist** - Create a checklist of questions that can be incorporated into group work/lectures that challenge students to think about how they would approach clinical scenarios based on ethnic minority patients.

3. **Develop a resource** - In order to decolonise the curriculum I looked into where the medical school could implement a useful resource into their curriculum and where it would fit.

4. **Gather information from the students** - To identify how students feel the curriculum so far has been decolonised.
DECOLONISING THE CURRICULUM PT 2: How do we start thinking: What about black and brown patients?

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The question of ‘would this condition reflect the same way in black/brown patients’? is one that is not asked enough. Ethnic minority groups continue to experience adverse outcomes in health care and health experience across the UK. This project aims to highlight some areas of discrepancy when examining patients of ethnic minority backgrounds as well as challenge students and medical educators to ask more questions in an attempt to identify the clear gaps that are failing ethnic minority groups.

INTRODUCTION

It can be difficult to identify gaps in our medical knowledge when it comes to health in ethnic minority groups. This is due to the curriculum being predominantly white and medical students having limited exposure to diverse teaching materials. The lack of exposure prevents questioning around conditions that effect large groups of minority patients and as a result we are not equipped to deliver the best for all of our patients.

The difficulty in the identification of jaundice on black/darker skin (see poster 1) lead me to ask myself, ‘is everyone asking these questions?’ And more importantly if these questions are not being asked, what are the long term health outcomes for our ethnic minority patients?

The University of Leicester Medical School have recognised that the ‘decolonising toolkit’, which is a set of guidelines and prompts to help educators in Higher Education Providers (HEPs) make their module content, assessment and practice more racially inclusive and relatable to all students, is an invaluable tool.

The aim of this project is to utilize and elevate this toolkit and implement its content into every day medical teaching at the university. The idea is to provoke discussion around this topic as well as produce usable outcomes and strategies that medical students can use in practice so that they feel more comfortable treating patients of all races.

OBJECTIVES

• To identify whether medical students are aware of limitations that they may have when it comes to managing certain conditions in black and brown patients
• To create some common questions that allows this idea to be explored
• To gain an insight into how well equipped medical students feel entering the workforce and managing ethnic minority patients with certain conditions
• To identify any areas in the curriculum that already support this

METHODS

I looked for available resources on blackboard that took into account ethnic minority throughout the clinically based content.

I looked to identify exam type questions/practice material that took into account minority ethnic groups.

I Gathered information via a short survey asking medical students questions specific to identifying conditions in black and brown patients/how equiped did they feel to approach these questions.

PROJECT OUTPUTS

• Create questions via google form - Create a bank of questions/checklist for medical students, that provoke thought and discussion around specific clinical conditions that affect black and brown patients. The aim is that this will encourage conversation, reflection and overall solutions.
• Collate questions into a Worksheet - Practically I would like to create a usable resource such as a worksheet, that can be used within the medical curriculum. eg. at the beginning of the year 3/4 induction/within GP tutorials.
• Gather student opinions on topic – I thought that it was important to gain an idea of how other students felt regarding this topic.

EXAMPLE QUESTIONS

1. How do you assess central capillary refill? Are there barriers to using this method on patients with darker skin?
2. Can you describe eczema in black skin. What are the main differences compared to white skin?
3. Were any of the questions above questions difficult to answer? If so what was the reason for this?
4. Have you ever thought about any of these barriers previously? Have you discussed them with others, e.g peers, tutors etc?

STUDENT RESPONSE

"The majority of what I have learned from discussions with my peers/our reading, I am aware from these conversations that clinic signs differ. (I do not recall being taught the majority of these). I do not know how to see these signs in black patients. For example, I was unaware until a few years ago that black skin did not blanch when pressed."

"The difficulty in the identification of jaundice on black/darker skin (see poster 1) lead me to ask myself, ‘Is everyone asking these questions?’ And more importantly if these questions are not being asked, what are the long term health outcomes for our ethnic minority patients?"

"I had to really think about the answers, I’m not even sure they’re correct. And I may only be right because of the fact I’ve been part of MedRACE and take an interest in this area."

"I had tried to follow apps on Instagram that show photos of dermatology on black skin but this has not helped enough."

"It can be difficult to identify gaps in our medical knowledge when it comes to health in ethnic minority groups. This is due to the curriculum being predominantly white and medical students having limited exposure to diverse teaching materials. The lack of exposure prevents questioning around conditions that effect large groups of minority patients and as a result we are not equipped to deliver the best for all of our patients."

"It would be reasonable to learn about dermatology initially on lighter skin, where changes are more obvious and then move onto darker skin tones where pathology may be more challenging to see."

CONCLUSION/RESULTS

• The most common form of teaching/exposure that the students in the survey had was from: 1. Peers, 2. Social media 3. Social experience, eg. from ethnic minority friends. None of the students had discussed topics with tutors.

• 26% of students who took the survey stated that they felt that they had not been appropriately examined on conditions that affect darker skinned patients.

• Over 80% of students in the survey thought that teaching on this topic was very necessary.

• The survey questions allow students to be challenged on topics they may otherwise never have thought about. Allocating specific time where students can discuss these topics with tutors before the clinical years begin could be invaluable.

RECOMMENDATIONS

• Discuss whether this document could be included into the beginning of the phase 2 induction work.
• Develop the checklist to include more clinical conditions.
• Encourage as many students and staff to use questionnaires such as this to challenge themselves and encourage reflection.

SUPERVISORS

Dr Kate Williams
Dr Sharif Syed

REFERENCES

1. Platt. DECOLONISING THE CURRICULUM: Pt 1. How do we start thinking: What are the long term health outcomes for our ethnic minority patients’? 2

2. Platt. DECOLONISING THE CURRICULUM PT 2: How do we start thinking: What about black and brown patients?

3. Hartland. DECOLONISING THE CURRICULUM PT 3: How equipped did they feel to approach these questions.

4. DECOLONISING THE CURRICULUM PT 4: Taking into account minority ethnic groups.

5. I looked for available resources on blackboard that took into account ethnic minority throughout the clinically based content.

6. I looked to identify exam type questions/practice material that took into account minority ethnic groups.

7. I Gathered information via a short survey asking medical students questions specific to identifying conditions in black and brown patients/how equiped did they feel to approach these questions.
Decolonising the Curriculum: Worksheet

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Ethnic minority groups continue to experience adverse outcomes in health care and health experience across the UK. This short series of questions aims to provoke discussion regarding the approach to ethnic minority groups.

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These first 5 questions may be a part of a quiz for medical students. I would like to test these questions out with you. Please provide a short answer to the first 5 questions. If you find them difficult to answer, please explain why.

1. How do you assess central capillary refill? Are there barriers to using this method on patients with darker skin?

2. Can you describe eczema in black skin. What are the main differences compared to white skin?

3. What does bruising look like on black/brown skin? How does this differ from white skin?

4. Please describe urticaria on darker skin, how does this differ from white skin?

5. What are the barriers when trying to identify jaundice in black and brown skinned patients.
The next set of questions are to help identify any impact that the current methods of decolonizing the curriculum may have had.

6. Were any of the questions above questions difficult to answer? If so what was the reason for this?

7. Do you feel that you have been examined on conditions that affect black and brown skin whilst in medical school?
   - Yes, about the right amount
   - Yes, but not frequently enough
   - Not at all
   - Can't remember

8. Have you ever thought about any of these barriers previously? Have you discussed them with others. E.g peers, tutors etc?

9. Have you had an opportunity to address them and if so how? Please provide examples of how you have tackled this on placement or in a teaching environment – what have you or others done?

10. Would you be interested in sessions where questions such as these could be discussed with the supervision of doctors and other healthcare professionals? Do you think these should be part of the core teaching?

11. How necessary do you feel that teaching on this topic is? Please explain

12. Any other comments?

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