



**INTERNATIONAL JOURNAL OF
PHARMACEUTICAL SCIENCES**
[ISSN: 0975-4725; CODEN(USA): IJPS00]
Journal Homepage: <https://www.ijpsjournal.com>



Research Paper

Regulatory Conversion Capacity in Small-State Health Systems: A Five-Domain Framework for Translating Health Workforce Capacity into Accessible Pharmaceutical and Dental Services in The Gambia

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ARTICLE INFO

Published: 13 Oct 2026

Keywords:

health workforce; health practitioner regulation; regulatory design; regulatory conversion capacity; pharmaceutical services; dental services; task-sharing; small states; healthcare access; environmental health; The Gambia

DOI:

10.5281/zenodo.23333096

ABSTRACT

Health workforce shortages are commonly presented as a principal explanation for limited healthcare access in small and resource-constrained states. This study argues that workforce availability alone does not determine service capacity. The way regulatory systems recognize professional cadres, allocate competencies, structure supervision, enable deployment and maintain safeguards can influence how much available workforce capacity is converted into accessible services. The study examines this relationship through a qualitative case study of The Gambia. Field and documentary analysis was undertaken over six months, from January to June 2026. The study included 110 participants comprising 10 pharmacists, 25 pharmacy technicians, 16 students, 12 nurse dispensers, 5 environmental professionals, 7 inspectors, 17 dental professionals and 18 business professionals. Documentary analysis examined the relationship between professional regulation, service delivery and environmental safeguards. The study develops the Regulatory Conversion Capacity Framework (RCCF) and proposes the Regulatory Conversion Capacity Index (RCCI) as an exploratory instrument for assessing how regulatory systems convert available workforce capacity into safe, accountable and accessible services. RCCF contains five domains: professional recognition, competency allocation, supervisory proportionality, deployment enablement and safeguard integrity. The analysis indicates that workforce shortage, workforce maldistribution and regulatory conversion deficit should be treated as analytically distinct but potentially interacting conditions. The dental sector illustrates the implications of limited workforce utilization and skill-mix options, while pharmaceutical services demonstrate the need to balance regulatory safeguards with appropriate workforce flexibility. Environmental health represents a cross-cutting

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Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



boundary: increasing access without adequate waste and safety controls can create new public-health risks. The study's contribution is conceptual and applied. It provides a structured distinction between the quantity of available health workers and the regulatory capacity to translate their competencies into services. RCCF and RCCI are proposed as instruments for further empirical validation and potential application across small-state health systems.

INTRODUCTION

Health-system performance depends not only on the number of trained health professionals available but also on how those professionals are recognized, deployed, supervised and permitted to use their competencies. Workforce shortages, geographical maldistribution and skill-mix limitations remain major constraints to health-system performance, particularly in resource-constrained settings (Chen et al., 2004; Frenk et al., 2010).

Health practitioner regulation has traditionally focused on competence, professional conduct, patient protection and accountability. Contemporary regulatory scholarship increasingly recognizes that regulation can also influence workforce availability, distribution, accessibility and performance. The World Health Organization's 2024 global guidance specifically identifies regulation as having implications for workforce availability, equitable distribution and health-system performance while emphasizing the continuing need to protect patients.

This creates an important analytical distinction.

A country may have:

1. **a genuine workforce shortage;**
2. **a maldistribution of available workers;** or
3. **a regulatory conversion deficit**, in which appropriately trained human capacity exists but cannot be fully translated into lawful, supervised and accessible services.

These conditions may coexist, but they are not identical and should not automatically receive the same policy response.

The distinction is particularly relevant to small states. Small health systems frequently operate with limited pools of specialized professionals, narrow training pipelines, migration pressures and geographically concentrated services. In such settings, regulatory decisions affecting a relatively small number of professionals can have system-wide consequences.

The Gambia provides an appropriate case through which to examine this relationship. Its regulatory architecture includes legislation governing medicines and pharmacy practice alongside professional and environmental governance arrangements. The National Assembly's legislative repository lists the **Pharmacy Council Act 2014** and **Medicines and Related Products Act 2014**, among other relevant legislation.

The central question of this study is therefore:

How does regulatory design influence the extent to which available health-workforce capacity is converted into safe and accessible pharmaceutical and dental services in a small-state health system? The paper develops the **Regulatory Conversion Capacity Framework (RCCF)** and the associated **Regulatory Conversion Capacity Index (RCCI)** to address this question.

2. Study Objectives

The study sought to:

1. examine how professional regulation affects utilization of pharmaceutical and dental workforce capacity;
2. examine the relationship between professional recognition, competency allocation and service access;
3. assess how supervision and deployment arrangements influence service availability;
4. examine environmental safeguards as a condition of responsible service expansion; and
5. develop a transferable analytical framework for small-state health systems.



3. Conceptual Contribution

3.1 From workforce availability to workforce conversion

Existing health-workforce approaches commonly focus on workforce density, education, recruitment, retention, distribution and skill mix. Regulatory scholarship, meanwhile, examines how practitioners are registered, licensed, supervised and held accountable.

This study connects these areas through the concept of **regulatory conversion capacity**.

The central proposition is:

Available workforce capacity does not automatically become available healthcare capacity. Regulatory design forms part of the mechanism through which professional capacity is converted into service capacity. The third condition is the principal conceptual focus of this study.

The distinction can be represented as follows:

Table 1

Distinction Between Workforce Shortage, Workforce Maldistribution, and Regulatory Conversion Deficit

Condition	Principal problem	Typical policy response
Workforce shortage	Too few appropriately trained workers	Education, recruitment and retention
Workforce maldistribution	Workers concentrated away from areas of need	Deployment and retention strategies
Regulatory conversion deficit	Existing competencies cannot be adequately converted into regulated service capacity	Regulatory and institutional redesign

4. The Regulatory Conversion Capacity Framework (RCCF)

The **Regulatory Conversion Capacity Framework (RCCF)** is proposed as a new analytical framework developed through this study.

It contains five interconnected domains.

Table2

Five Domains of the Regulatory Conversion Capacity Framework (RCCF)

Domain	Question
R1. Recognition	Who is legally recognized and authorized to practise?
R2. Competency Allocation	What functions can each recognized cadre safely perform?
R3. Supervisory Proportionality	Is supervision proportionate to competence, risk and complexity?
R4. Deployment Enablement	Can appropriately qualified personnel reach populations and facilities where services are needed?
R5. Safeguard Integrity	Are quality, ethical, professional and environmental safeguards maintained?

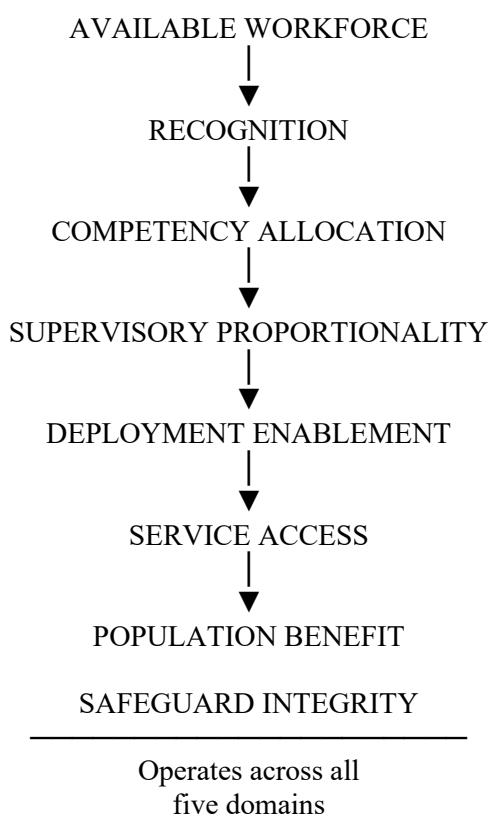


Figure 1. Regulatory Conversion Capacity pathway

The framework therefore proposes that:

Workforce availability → regulatory conversion → service capacity → access

rather than simply:

Workforce availability → access

This is the principal conceptual contribution of the paper.

To make RCCF operational, the study proposes the **Regulatory Conversion Capacity Index (RCCI)**.

Each domain is assigned a score from **0 to 4**.

Table3

RCCI Domain Scoring Scale and Interpretation

5. The Regulatory Conversion Capacity Index (RCCI)

Score	Interpretation
0	Not present
1	Very limited
2	Partially functional
3	Substantially functional
4	Strongly functional

The five domains therefore produce a maximum score of 20.

Regulatory Conversion Capacity Index (RCCI)

The Regulatory Conversion Capacity Index (RCCI) provides a simple measure of how

effectively a regulatory system converts available health-workforce capacity into regulated service capacity.

The RCCI is calculated across five domains:

- **R1:** Professional Recognition
- **R2:** Competency Allocation
- **R3:** Supervisory Proportionality
- **R4:** Deployment Enablement
- **R5:** Safeguard Integrity

Each domain is scored from **0 to 4**, giving a maximum possible total of **20 points**.

The formula is:

$$\text{RCCI (\%)} = (\text{Total Domain Score} \div 20) \times 100$$

where:

$$\text{Total Domain Score} = \text{R1} + \text{R2} + \text{R3} + \text{R4} + \text{R5}$$

For example, if the five domains receive scores of

3, 2, 3, 2, and 3, the total score is:

$$3 + 2 + 3 + 2 + 3 = 13$$

Therefore:

$$\text{RCCI} = (13 \div 20) \times 100 = 65\%$$

The RCCI is therefore reported on a **0–100 scale**, with higher scores indicating greater regulatory capacity to convert available workforce competencies into accessible and appropriately regulated services.

Because the RCCI is newly proposed in this study, the scoring thresholds are exploratory and require further validation before being used for formal international comparison or ranking.

Equal weighting is used at this developmental stage to maintain transparency and avoid assigning unsupported assumptions about the relative importance of the five domains.

Table 4

Proposed Exploratory Interpretation of RCCI Scores

RCCI	Exploratory interpretation
0–24	Very limited conversion capacity
25–49	Limited conversion capacity
50–74	Moderate conversion capacity
75–89	Strong conversion capacity
90–100	Very strong conversion capacity

These categories are **provisional analytical bands**, not validated international standards. They should not be used for country ranking until the index has undergone empirical validation.

This distinction is important because the RCCI is introduced in this study as a **new exploratory index**, rather than as an established or validated international measurement instrument.

6. Why RCCF/RCCI Adds Something Different

RCCF does not claim that workforce shortages, task-sharing or health-practitioner regulation have previously been ignored. Rather, it brings five regulatory mechanisms together around one specific question:

How much of the health capacity a country already possesses can its regulatory system safely convert into actual service capacity?

This creates a practical diagnostic distinction.

If a country scores poorly because it has too few professionals, the response is primarily workforce investment.

If it scores poorly because professionals are geographically concentrated, deployment policy becomes central.

If qualified capacity exists but is blocked by recognition, scope, supervision or institutional arrangements, the appropriate intervention may instead be regulatory redesign.



The framework therefore aims to help policymakers identify **where the constraint actually occurs**.

7. The Gambian Regulatory Context

The Gambia's health regulatory system contains multiple statutory and institutional functions relating to professional practice, medicines and public-health protection. The National Assembly's current legislative repository lists the Pharmacy Council Act 2014 and Medicines and Related Products Act 2014.

The existence of legislation, however, does not automatically establish effective implementation. Contemporary WHO guidance emphasizes the difference between regulatory policy and regulatory practice and identifies implementation as a major determinant of regulatory effectiveness. The analytical issue is consequently not simply whether regulation exists, but whether its design and implementation are aligned with:

- workforce capacity;
- professional competence;
- population needs;
- geographic distribution;
- patient safety; and
- environmental safeguards.

8. Methodology

8.1 Study design

The study used a qualitative case-study design combining documentary review, policy analysis and field-based stakeholder engagements. The study period was **January to June 2026**, allowing the analysis to capture perspectives across a six-month period rather than a single point in time.

The design was selected because the research question concerns how regulatory provisions are interpreted and experienced in practice, rather than simply measuring the number of health professionals or licensed facilities. The analysis therefore examined the relationship between formal regulatory arrangements and their practical implications for workforce utilization and service access. The manuscript was prepared with reference to established qualitative reporting principles, particularly the **Standards for Reporting Qualitative Research (SRQR)**. Relevant elements of the **Consolidated Criteria for Reporting Qualitative Research (COREQ)** were considered where applicable to the stakeholder engagements.

8.2 Participants

Purposive sampling was used to obtain perspectives across professional, regulatory, educational, environmental and commercial groups.

Table 5

Participant Characteristics by Stakeholder Category

Participant category	Frequency	Percentage
Pharmacists	10	9.1%
Pharmacy technicians	25	22.7%
Students	16	14.5%
Nurse dispensers	12	10.9%
Environmental professionals	5	4.5%
Inspectors	7	6.4%
Dental professionals	17	15.5%
Business professionals	18	16.4%
Total	110	100.0%



The sample was deliberately heterogeneous so that regulatory questions could be examined from several positions within the health-service environment.

8.3 Data collection

Engagements examined:

- professional recognition;
- licensing;
- scope of practice;
- supervision;
- workforce distribution;
- rural and peri-urban access;
- pharmaceutical service delivery;
- dental workforce utilization;
- regulatory coordination;
- environmental compliance; and
- healthcare-waste management.

The study used experience-based and semi-structured engagement rather than a standardized population survey.

8.4 Analytical procedure

Analysis proceeded through five stages:

1. familiarization with documentary and field material;
2. initial coding;
3. organization of codes around RCCF domains;
4. identification of cross-cutting themes; and
5. comparison of findings across participant categories and documentary evidence.

Both deductive and inductive reasoning were used. The five RCCF domains provided the deductive structure, while additional issues emerging from the field material were retained where they were analytically relevant.

8.5 Theme frequencies

The participant numbers in Table 1 are **sample frequencies**, not thematic frequencies.

The study deliberately does not assign percentages to themes without a participant-level coded dataset demonstrating how many participants independently expressed each theme. This is methodologically important because qualitative theme frequency is not equivalent to statistical prevalence.

Accordingly, the results report **analytical salience and cross-source convergence** rather than manufacturing numerical theme frequencies.

8.6 Trustworthiness

Credibility was strengthened through:

- cross-sector triangulation;
- comparison of professional and regulatory perspectives;
- documentary verification;
- explicit separation of evidence and interpretation;
- purposive sampling across different roles; and
- use of both deductive and inductive analysis.

The study therefore presents an explanatory qualitative account rather than a population-level prevalence estimate.

9. Findings

9.1 Recognition influences usable workforce capacity

The analysis identified an important distinction between possessing training and possessing recognized authority to use that training. Professional education creates potential capacity; regulatory recognition determines whether that capacity can enter the formal service system.

Table 6

Principal Analytical Themes and Evidence Convergence Across RCCF Domains



Analytical theme	Main stakeholder perspectives	RCCF domain	Interpretation
Professional recognition	Pharmacists, technicians, dental professionals, students and regulatory stakeholders	R1	Formal recognition determines whether trained personnel can participate in regulated service delivery.
Competency allocation	Pharmacy, nursing and dental stakeholders	R2	Scope-of-practice arrangements influence how existing competencies are utilized.
Supervisory proportionality	Professionals and inspectors	R3	Supervision must balance patient safety with the practical availability of qualified personnel.
Workforce deployment	Practitioners, business stakeholders and service providers	R4	Geographic concentration can limit effective access even where national workforce capacity exists.
Safeguard integrity	Environmental professionals, inspectors and health practitioners	R5	Expansion of service capacity requires corresponding quality, safety and environmental safeguards.

Note. The table presents analytical convergence rather than numerical theme prevalence. Participant-category frequencies are reported separately in **Table 5**. Numerical frequencies for individual themes were not assigned because the available qualitative dataset was not structured as a participant-level frequency analysis.

This supports the first RCCF proposition:

Unrecognized competence is not equivalent to deployable regulated capacity.

This is consistent with contemporary international evidence that health-practitioner regulation can influence workforce availability, accessibility and performance.

9.2 Competency allocation determines how workforce capacity is used

The allocation of tasks across professional cadres emerged as an important regulatory issue. Task-sharing does not mean eliminating professional standards. Properly designed task-sharing requires:

- appropriate education;
- competency assessment;
- defined scope;
- supervision;

- accountability; and
- continuing professional development.

The policy question is therefore not simply whether a task belongs to one profession, but whether it can safely be performed by another appropriately trained cadre under a defensible regulatory arrangement.

9.3 Supervision should be proportionate to risk

Supervision is essential for patient protection, but supervision requirements can also affect whether services can operate in settings where specialist professionals are scarce. RCCF therefore treats **supervisory proportionality** as a separate domain.

A proportionate model considers:

clinical risk + complexity + competence + setting

rather than professional hierarchy alone.

The objective is not deregulation.

It is risk-proportionate regulation.

9.4 Workforce distribution affects actual access

The national presence of health professionals does not necessarily mean that services are locally available. Where specialized personnel are

concentrated around major urban areas, rural populations may continue to experience access barriers even when national workforce numbers improve.

This is especially relevant to oral health. Evidence across Africa has documented substantial workforce shortages and geographical inequalities and has identified broader skill-mix approaches and incentives for underserved areas as possible strategies (Gallagher et al., 2023).

The Gambian case therefore demonstrates why workforce density should not be treated as a sufficient measure of access.

9.5 Dental services provide an important test of regulatory conversion

The dental sector provides a useful application of RCCF because oral healthcare depends not only on dentists but on an appropriately structured oral-health team.

The central policy question is whether appropriately trained auxiliary or mid-level cadres can safely undertake defined preventive, routine and supportive functions within an accountable regulatory system.

Such an approach would require:

- recognized qualifications;
- registration;
- defined scopes of practice;
- competency standards;
- supervision;
- referral pathways; and
- continuing professional development.

The study does not argue that every dental function should be redistributed. It argues that the regulatory system should explicitly examine where safe competency-based service expansion is possible.

9.6 Pharmaceutical regulation requires a different balance

Pharmaceutical services involve substantial patient-safety risks. Consequently, greater flexibility must not be interpreted as weaker regulation. The more appropriate approach is **graduated responsibility**, in which authority corresponds to:

- training;
- competence;
- risk;
- supervision; and
- accountability.

The objective is to maintain medicine-quality and patient-safety protections while avoiding unnecessary restrictions on appropriately trained personnel.

The Pharmacy Council Act 2014 and Medicines and Related Products Act 2014 provide important statutory foundations for this regulatory environment.

9.7 Environmental safeguards must accompany service expansion

Healthcare access cannot be considered independently of environmental health. Increasing pharmaceutical and dental service activity also generates healthcare waste and related environmental responsibilities.

The RCCF therefore places **safeguard integrity across the entire framework**, rather than treating it as an afterthought.

The principle is:

Access expansion is sustainable only when quality, safety and environmental safeguards expand with it.

10. Integrated Regulatory Conversion Model



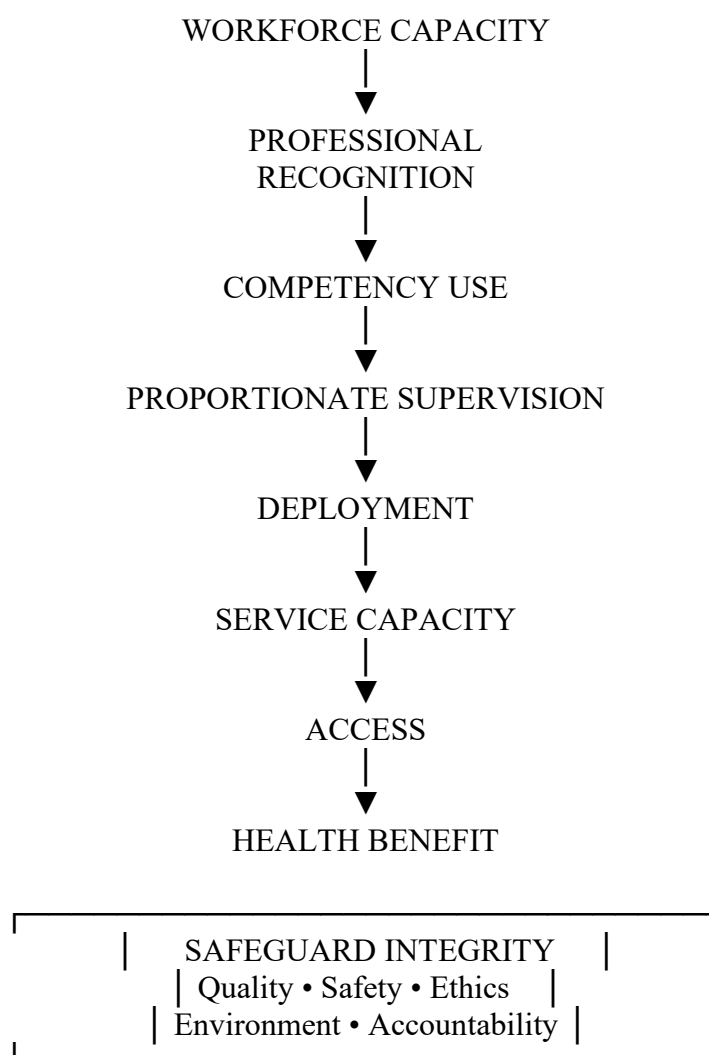


Figure 2. Regulatory conversion cycle

The model explains why increasing workforce numbers alone may not produce proportional improvements in access.

11. DISCUSSION

The study's central finding is that workforce availability and service accessibility should not be treated as interchangeable concepts. The principal contribution of this study is the introduction of **regulatory conversion capacity** as an analytical concept linking health-practitioner regulation with workforce utilization and service access. Existing research recognizes relationships between regulation, workforce availability, distribution,

quality and health-system performance (Leslie et al., 2023; WHO, 2024). This study builds on that literature by distinguishing regulatory conversion deficits from workforce shortage and workforce maldistribution and by organizing the relationship into the five-domain RCCF. The accompanying RCCI provides a simple exploratory method for operationalizing the framework. Its validity, reliability and usefulness for cross-country comparison remain to be established through subsequent empirical studies.

A conventional approach may assume:

Workforce → Services → Access

RCCF proposes:

Workforce → Regulation → Conversion → Services → Access

This does not replace existing health-workforce theory. It adds an analytical layer that explains how regulation can mediate the relationship between workforce capacity and actual service delivery.

The distinction between shortage, maldistribution and regulatory conversion deficit is particularly useful for small health systems.

A country experiencing genuine workforce scarcity requires investment in education, recruitment and retention.

A country with sufficient professionals but severe geographical concentration requires deployment and retention strategies.

A country with appropriately trained personnel whose competencies cannot be fully utilized may require regulatory redesign.

These problems may occur simultaneously.

The implication is that **more professionals are not necessarily the only solution**.

A health system may sometimes increase effective service capacity by improving how existing competencies are recognized, allocated and deployed, while maintaining appropriate safeguards.

This is compatible with the contemporary WHO position that practitioner regulation can support both patient protection and wider health-system objectives, including workforce availability and equitable distribution.

12. Implications for Small States

The framework is particularly relevant to small-state health systems because small professional pools can make regulatory decisions disproportionately consequential.

Common characteristics may include:

- limited specialist workforce;
- small domestic training pipelines;
- reliance on foreign-trained professionals;

- migration;
- urban concentration;
- limited regulatory personnel; and
- restricted institutional capacity.

RCCF is transferable because it does not prescribe identical professional scopes across countries.

Instead, it asks five questions:

1. **Who can legally contribute?**
2. **What can they safely do?**
3. **How much supervision is actually required?**
4. **Can they reach populations where they are needed?**
5. **Are safety and environmental safeguards maintained?**

This makes the framework potentially applicable to other small states and other health professions.

13. Policy Recommendations

13.1 Establish competency-based regulatory pathways

Professional regulation should increasingly distinguish between professional titles and demonstrable competencies where clinically and legally appropriate.

13.2 Develop structured task-sharing

Selected pharmaceutical and oral-health functions should be assessed for safe redistribution under:

- standardized education;
- competency assessment;
- registration;
- defined scopes;
- supervision;
- referral mechanisms;
- continuing professional development; and
- disciplinary accountability.

13.3 Introduce proportional supervision

Supervision should be based on:



risk + competence + complexity + context.

13.4 Link regulation to rural deployment

Regulatory reform should be accompanied by:

- rural progression;
- appropriate facility licensing;
- housing or accommodation support where feasible; and
- incentives;
- continuing professional development outside urban centres.

13.5 Strengthen regulatory coordination

Professional councils, medicines regulators, environmental authorities and inspectors should have clear mechanisms for information sharing and coordinated enforcement.

13.6 Integrate environmental safeguards

Healthcare expansion should include corresponding systems for:

- waste segregation;
- safe storage;
- collection;
- treatment;
- disposal;
- inspection; and
- accountability.

13.7 Pilot the RCCI

The RCCI should first be piloted within pharmaceutical and oral-health regulation in The Gambia before consideration for wider national or international comparison.

14. RCCI Assessment Matrix

Table 7
Regulatory Conversion Capacity Index (RCCI) Assessment Matrix

Domain	Key indicators	Possible evidence
R1 Recognition	Recognized cadres; registration pathways	Legislation; council records
R2 Competency Allocation	Authorized functions; task-sharing provisions	Regulations; professional standards
R3 Supervisory Proportionality	Supervision requirements; risk differentiation	Licensing rules; regulatory records
R4 Deployment Enablement	Rural licensing; distribution; incentives	Workforce and facility data
R5 Safeguard Integrity	Inspection; quality systems; complaints; waste controls	Inspection and environmental records

Each domain is scored from **0 to 4**, giving a maximum possible total of **20 points**.

The formula is:

$$\text{RCCI (\%)} = (\text{Total Domain Score} \div 20) \times 100$$

where:

$$\text{Total Domain Score} = \text{R1} + \text{R2} + \text{R3} + \text{R4} + \text{R5}$$

The maximum score is 100.

Importantly, RCCI should currently be treated as an exploratory research instrument rather than a validated international ranking system.

15. Strengths of the Study

The study has five principal strengths.

First, it examines regulation and workforce capacity together rather than treating them as separate policy domains.

Second, it incorporates perspectives from **110 participants across eight stakeholder categories**.

Third, it focuses on pharmaceutical and dental services while incorporating environmental safeguards, creating a broader systems perspective.



Fourth, it develops a practical framework and index that can potentially be tested beyond The Gambia.

Fifth, it explicitly distinguishes empirical findings from conceptual propositions and does not claim that the proposed index has already been validated.

16. Limitations

This study has several limitations.

First, it is a qualitative case study and is not statistically representative of the entire Gambian health workforce.

Second, participants were purposively selected, meaning that participant-category frequencies cannot be interpreted as population prevalence.

Third, the field component covered January–June 2026 and therefore represents a defined period rather than a longitudinal assessment.

Fourth, thematic findings are interpretive. The study does not manufacture numerical theme frequencies where the underlying participant-level coding matrix is unavailable.

Fifth, RCCF and RCCI are newly proposed. The index requires independent assessment of content validity, inter-rater reliability, construct validity and sensitivity to regulatory change.

Sixth, the study primarily examines regulatory conversion rather than measuring patient outcomes directly.

These limitations mean that the framework should be considered a **testable conceptual contribution**, not a completed international measurement standard.

17. Future Validation Programme

The proposed research programme has three stages.

Stage 1: National validation

Apply RCCI independently to pharmaceutical and dental regulation in The Gambia.

Stage 2: Cross-country validation

Apply RCCF/RCCI in comparable small-state settings with different regulatory structures.

Stage 3: Outcome validation

Examine whether RCCI scores are associated with measurable indicators such as:

- workforce utilization;
- geographical service availability;
- rural service density;
- waiting times;
- professional retention;
- patient access;
- quality indicators; and
- safety outcomes.

If subsequent studies demonstrate reliability and validity, RCCI could potentially become a comparative policy instrument.

CONCLUSION

This study argues that health workforce shortages are only part of the access problem. The more complete question is how effectively a health system converts available human capacity into safe, regulated and geographically accessible services.

The study therefore distinguishes:

workforce shortage;
workforce maldistribution; and
regulatory conversion deficit.

The **Regulatory Conversion Capacity Framework (RCCF)** provides a structured way of examining this relationship through five domains: **Recognition → Competency Allocation → Supervisory Proportionality → Deployment Enablement → Safeguard Integrity.**

The **Regulatory Conversion Capacity Index (RCCI)** provides a simple exploratory method of scoring these domains:

$$\text{RCCI (\%)} = (\text{Total Domain Score} \div 20) \times 100$$

The Gambia provides the case through which the framework is developed, but the underlying



analytical problem is not uniquely Gambian. Small health systems worldwide face the challenge of maximizing the value of limited professional capacity while maintaining patient safety and regulatory accountability.

The study's central proposition is therefore:

Effective health regulation should not merely control professional practice; it should safely convert appropriately trained workforce capacity into accessible, accountable and sustainable health services.

RCCF and RCCI offer a structured starting point for examining that proposition empirically

Declarations

Ethics

The study involved professional and stakeholder engagements concerning health-system regulation and service delivery. Participation was voluntary and identifying personal information was excluded from the reported analysis. The final journal submission should include the applicable ethics-review approval, exemption or institutional determination based on the actual governance pathway used for the study.

Consent

Participants were informed of the purpose of the study and the voluntary nature of participation. No personally identifying participant information is reported.

Funding

The author received no specific grant from any funding agency in the public, commercial or not-for-profit sectors for this study.

Conflict of Interest

The author declares no conflict of interest related to this study.

Author Contribution

Dr Abdoulie Bojang conceived and designed the study, conducted the policy and field analysis, developed the RCCF and RCCI, analyzed and synthesized the findings, and prepared the manuscript.

The study introduces novel contributions- **Regulatory Conversion Capacity Framework (RCCF)** and **Regulatory Conversion Capacity Index (RCCI)** to examine how regulatory design influences the conversion of available health-workforce capacity into accessible and safely regulated services. Its principal contribution is distinguishing **workforce shortage, workforce maldistribution, and regulatory conversion deficit** as related but distinct constraints on healthcare access, with particular relevance to small-state health systems.

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HOW TO CITE: Dr Abdoulie Bojang, Regulatory Conversion Capacity in Small-State Health Systems: A Five-Domain Framework for Translating Health Workforce Capacity into Accessible Pharmaceutical and Dental Services in The Gambia, Int. J. of Pharm. Sci., 2026, Vol 4, Issue 10, 1664-1679, <https://doi.org/10.5281/zenodo.23333096>