

RESEARCH STRATEGY

CENTER FOR CLINICAL EPIDEMIOLOGY

2023-2026



CONTENTS

Contents

| | |
|---------------------------------------------------------------------------------------------|----|
| BACKGROUND - PART 1..... | 1 |
| 1.1 The new research strategy for Center for Clinical Epidemiology (CCE) | 1 |
| 1.2 The genesis of the research strategy | 1 |
| 1.3 Status..... | 1 |
| 1.3.1 Contribution to evidence-based treatment together with patients and relatives..... | 1 |
| 1.3.2 International collaboration | 2 |
| 1.3.3 Obtaining external research funding | 3 |
| 1.4 CCE vision and mission | 4 |
| STRATEGIC FOCUS AREAS - PART 2 | 5 |
| 2.1 Clinical focus areas where collaboration with patients and relatives is paramount..... | 6 |
| 2.2 Quality at a high professional level in all research emanating from the department..... | 8 |
| 2.3 Educating the next generation of researchers..... | 9 |
| 2.4 Consolidation and expanding international collaboration | 10 |
| 2.5 External financing..... | 11 |

BACKGROUND - PART 1

1.1 The new research strategy for Center for Clinical Epidemiology (CCE)

The research strategy for Center for Clinical Epidemiology (CCE) spans the period 2023-2026 and substitutes the research strategy for 2018-2022.

One of the purposes of the CCE research strategy is to emphasize that clinical epidemiological research is a key function at a university hospital. Another aspect is that the strategy specifies how we implement the strategic focus areas comprised in the research strategy for Odense University Hospital (OUH) and Department of Clinical Research, University of Southern Denmark (SDU). The strategic focus areas prioritized in the research strategy of OUH and Department of Clinical Research comprise i) Research for and with patients and relatives, ii) Evidence-based medication, iii) Excellent research collaboration, iv) Strong research culture, and v) Desirable career directions.

1.2 The genesis of the research strategy

Patient and relative representatives and the entire staff of CCE constitute the CCE research council. In this capacity, the patient and relative representatives have contributed to the construction of the new CCE research strategy by attending physical meetings and commenting on circulated documents. In common, we discussed the strategic focus areas and goals in this research strategy, comprising what we want and how to accomplish our goals.

1.3 Status

The objective of the CCE research strategy for the period 2019-2022 was a) to strengthen the research activities within the clinical fields established in the center and thereby increase our contribution to evidence-based treatment of patients, b) to increase the national and international collaboration, and c) to pay special attention to obtaining external funding. We have, to a large degree, managed to enhance these areas over the past years.

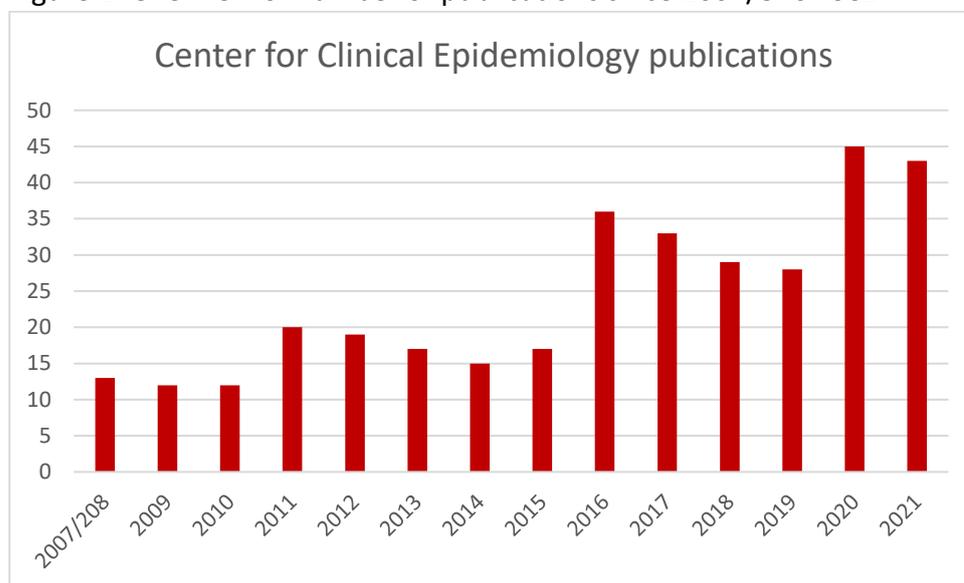
1.3.1 Contribution to evidence-based treatment together with patients and relatives

Patient and relative representatives have been affiliated with the CCE research council since the spring of 2018. These representatives have contributed to a number of facets of our research's processes and they have been directly involved in the research. We have discussed clinical focus areas, study populations, and revised specific outcome measures at our frequent meetings. The representatives have in particular contributed to improving

communication as regards funding and layman descriptions.

We have contributed to evidence-based patient treatment through our scientific publications. The below figure shows the number of CCE publications since 2007/2008.

Figure 1: Overview of number of publications since 2007/8 for CCE



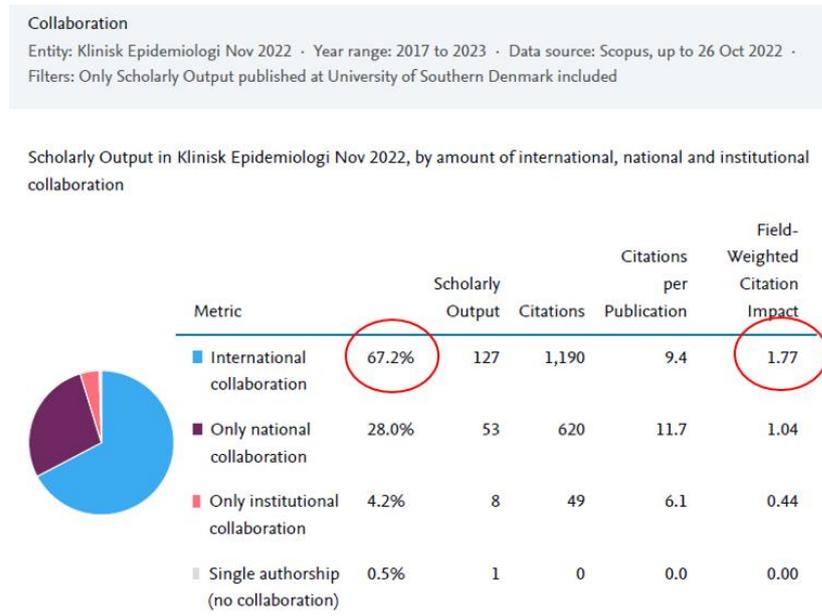
1.3.2 International collaboration

Three international adjunct professors (from the USA, Portugal and Brazil) are associated with the CCE and to a large extent they all contribute to new exciting initiatives and the progress in all activities at the CCE. We have taken great pleasure in research stays and exchange of academic staff members between our research units (Brigham and Women's Hospital and Harvard Medical School Boston, USA, and Hospital de São Francisco Xavier, CHLO, Lisbon, Portugal).

Additionally, we have research collaboration with research institutions in Norway, Germany, Singapore, Spain, Sweden, France, Italy and Portugal.

The latest bibliometric analysis shows that we have international contributions (coauthors) in 67 percent of our publications (Figure 2).

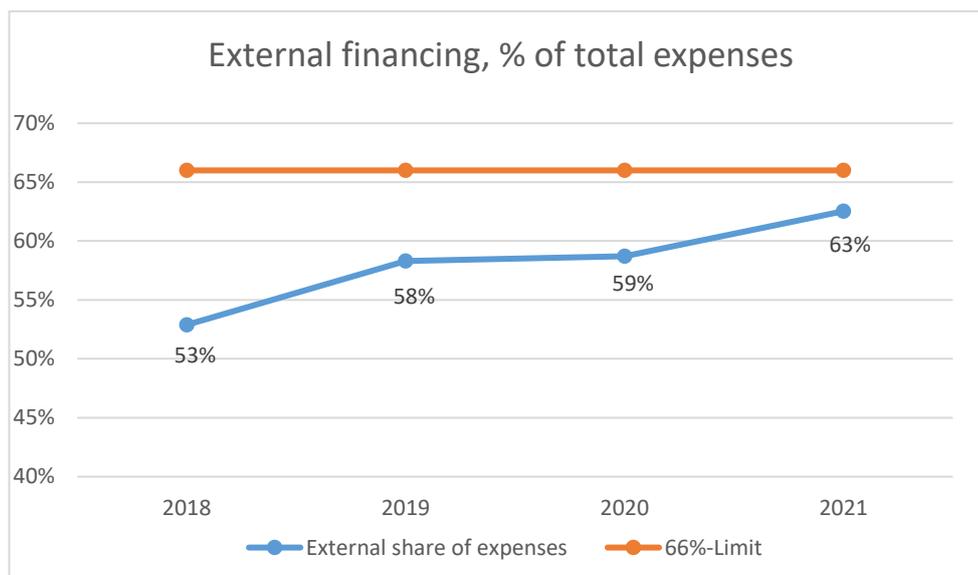
Figure 2: Bibliometric analysis for CCE showing the percentage of publications with international coauthors



1.3.3 Obtaining external research funding

The current stated objective in the research strategy from OUH and Department of Clinical Research is that 66 percent of all research means spent are provided by external funding. Obtaining external funding in CCE is evaluated according to this goal. We have to a great extent increased the annual share of external research funding compared with the total costs of the center (figure 3).

Figure 3: The share of external funding in relation to the total costs at CCE. The objective of 66 percent is marked in red.



1.4 CCE vision and mission

Our vision is to contribute actively to evidence-based patient treatment:

- We involve patients and relatives in the research processes
- Our research, and contribution to academic education, is respected in relevant national and international research settings
- We contribute substantially to evidence-based patient treatment and clinical recommendations to achieve patient recorded high quality
- We are open to supervision and collaboration within research in health science both nationally and internationally, and for projects within the Danish health care system

Our mission is to contribute with our know-how within clinical epidemiology and biostatistical methods in all relevant connections and relations:

- Together with patients and relatives we initiate research projects focusing on evidence-based patient treatment
- We contribute to projects in the Danish health care system as experts
- We are desirable partners in collaboration with researchers nationally and internationally
- We are supervisors and lecturers in academic educations

STRATEGIC FOCUS AREAS

- PART 2

We will concentrate on the below strategic focus areas in 2023-2026 in order to implement our mission and vision (listed in no order of priority):

- Clinical focus areas where collaboration with patients and relatives is paramount
- High professional quality in every aspect of our work
- Educating the next generation of researchers
- Securing and expanding international collaboration
- External funding

Below is a more detailed description of each focus area together with a specification of what we want and how to accomplish it.

2.1 Clinical focus areas where collaboration with patients and relatives is paramount

Figure showing the present clinical areas at CCE.



| What do we want: | How do we accomplish: |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| We will prioritize our well-established expertise within clinical disease areas (see figure above). | We will ensure the clinical foundation in our research and at least 80 percent of our publications must include clinical co-authors. International co-authors have participated in writing at least 60 percent of our publications. |
| We will make room for new areas in which we can develop new expertise areas. | We expand the collaboration with other research units. We are co-authors with at least three new research units within the time period of this strategy. |
| We will involve patients and relatives. | We have four annual meetings in our research council. |
| We will involve patients and relatives when we compose and follow-up on our research strategy. | We meet physically when a new research strategy is on the agenda and we circulate the strategy for comments to patients/relatives. |
| We will involve patients and relatives in all relevant research projects and we discuss outcome measurements to ensure that the outcomes are relevant to patients. | We initiate new projects in collaboration with patients and relatives. We make room for areas and projects initiated by patients. We involve patients and relatives in layman's descriptions. Our aim is that all or at least the majority of our layman descriptions are composed in collaboration with the patients and relatives. |
| We want 4-5 patient- and relative representatives affiliated with our research council. | We will affiliate another one or two patients/relatives, preferably within the elderly/pain area in order to cover a wide spectrum of our research areas. |

2.2 Quality at a high professional level in all research emanating from the department

| What do we want: | How do we accomplish: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>We will publish scientific articles in medical journals with the highest possible impact factor.</p> | <p>Twice per year, we will evaluate whether:</p> <ul style="list-style-type: none"> • 40 percent of our publications are listed in the top 10 percent of journals measured by Scimago Journal Rank • 80 percent are at least in the top 25 measured by Scimago Journal Rank • Field-weighted citation index within our own research (clinical epidemiology) is >1 |
| <p>Consultancy services are of high professional quality.</p> | <p>We are pleased to provide our expertise within clinical epidemiology and analyses, and our customers are satisfied with our services within clinical epidemiology and analyses.</p> |
| <p>We want to ensure the high professional level in the department and expand our expertise. To do that we aim at obtaining an additional professorship in clinical epidemiology and a professorship in biostatistics.</p> | <p>We will strive towards sufficient financing for advertising a professorship in clinical epidemiology and a professorship in biostatistics within the time period of this strategy.</p> |

2.3 Educating the next generation of researchers

| What do we want: | How do we accomplish: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The staff at CCE welcomes collaboration with undergraduate students and people interested in research in general.</p> <p>We have workstations for the Phd students for whom we are the main supervisors.</p> <p>We are co-supervisors for a number of Phd projects.</p> | <p>We always have 1-2 undergraduates or Phd students in the department.</p> <p>We are constantly co-supervisors for at least 5 Phd students.</p> <p>As a minimum, we evaluate twice per year at our department meetings.</p> |
| <p>It is our wish that at least 25 per cent of our Phd students continue their careers either as postdocs, lecturers, or associate professors (not necessarily at CCE).</p> | <p>It is an obligation for the main supervisor to determine whether it is relevant for the Phd student to continue an academic postdoc course.</p> <p>If an academic career is relevant, we contribute to the completion of a postdoc protocol one year before completion of the Phd. This will enable the Phd student to apply for funding for the postdoc position in continuation of a completed Phd education.</p> |
| <p>We endeavor a broad professional composition of staff/employees of which at least 20 per cent of Phd students, postdocs, lecturers, and associate professors have a professional background other than MD.</p> | <p>We focus on recruiting broadly within relevant professional profiles at CCE.</p> |

2.4 Consolidation and expanding international collaboration

| What do we want: | How do we accomplish: |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| We will increase the number of adjunct professors. | We recruit at least two new adjunct professors in the period 2023-2026. The research areas of these adjunct professors can be within our current or new clinical areas, and they can be within biostatistical methods. |
| We will exploit the opportunity for foreign research stays. | <p>We discuss the possibilities for foreign research stays twice yearly at our department meetings. All staff members at CCE who are interested in a foreign research stay will be offered this possibility.</p> <p>We can visit our adjunct professors or we can visit other research institutions.</p> |
| We will optimize the affiliation of visiting researchers. | <p>We strive for all staff members at CCE, who do not have a formal employment at the University of Southern Denmark, to be listed as visiting researchers at the Research Unit of Clinical Epidemiology.</p> <p>When visiting researchers arrive from abroad for a longer stay at CCE, we look into the possibilities for our visitors to become affiliated with the Research Unit of Clinical Epidemiology as visiting researchers.</p> |

2.5 External financing

| What do we want: | How do we accomplish: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>We are in a favorable position as at least 60 percent of the costs in CCE derive from external financing. We wish to increase this percentage in order to secure the growth of the department.</p> <p>We aim at not less than 70 percent of all costs derive from external financing.</p> | <p>Large foundations (for example Novo Nordisk, Det Frie Forskningsråd, Sygeforsikringen Danmark, Tryg, Karen Elise Jensens Fond):</p> <ul style="list-style-type: none"> • Every year we send at least four large funding applications each for more than DKK 1.5 m • Our international collaborators contribute to the applications for large foundations • We read each other's protocols before sending them <p>Small and medium foundations:</p> <ul style="list-style-type: none"> • We send applications to small and medium sized foundations, at least 30 per year <p>Pharmaceutical companies:</p> <ul style="list-style-type: none"> • We seize every chance and use all our contacts to obtain funding from pharmaceutical companies whenever relevant <p>We check the status of sent applications and incoming fundings every three months.</p> |

Many thanks to the patient and relative representatives and staff at CCE who have all contributed to the design of this research strategy. Thank you for a fruitful and constructive collaboration.

Yours faithfully

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Center for Clinical Epidemiology