

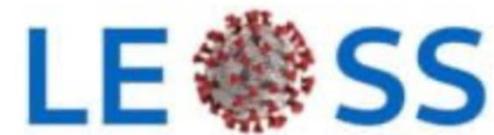
GECCO

# Basis: ISARIC, LEOSS, Expertenwissen des NFN\*



The screenshot shows the ISARIC COVID-19 Resources website. At the top, there's a search bar with placeholder text "What are you looking for?" and a "SEARCH" button. Below the search bar is the ISARIC logo and the text "International Severe Acute Respiratory and emerging Infection Consortium". A large image of a COVID-19 virus particle is prominently displayed. The main navigation menu includes "Home", "About Us", "COVID-19 Clinical Research Resources" (which is underlined), "SPRINT-SARI", "Lassa fever", "IMASOY - Bubonic Plague", and "Fellowship Scheme". Under the "COVID-19 Clinical Research Resources" section, there's a sub-section titled "CORE CASE RECORD FORM".

<https://isaric.tghn.org/COVID-19-CRF/>



PARTICIPANT IDENTIFICATION #: [\_\_\_\_]-[\_\_\_\_]-[\_\_\_\_]

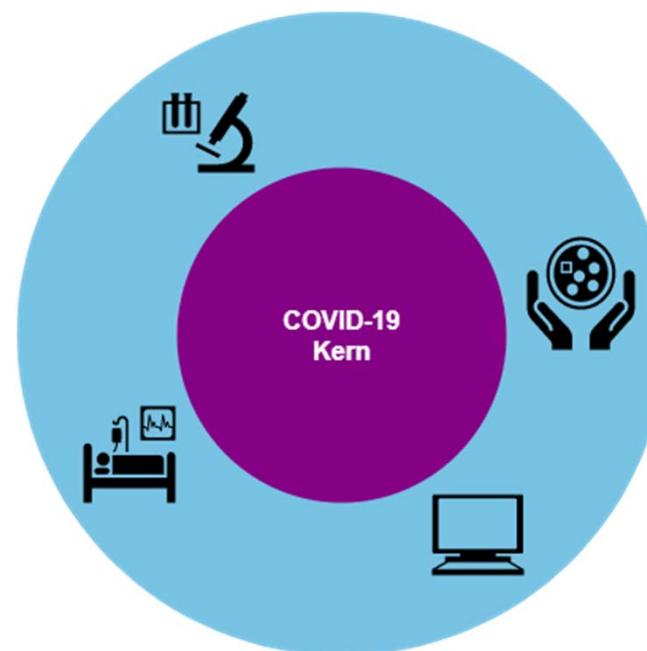
## CORE CASE RECORD FORM

CO-MORBIDITIES			
Co-morbidities and risk factors – Charlson Index will be calculated for each patient at analysis.			
Chronic cardiac disease, including congenital heart disease <i>(not hypertension)</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Obesity <i>(as defined by clinical staff)</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Chronic pulmonary disease <i>(not asthma)</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Diabetes with complications	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Asthma <i>(physician diagnosed)</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Diabetes without complications	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Chronic kidney disease	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Rheumatologic disorder	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Moderate or severe liver disease	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Dementia	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Mild liver disease	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Malnutrition	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
Chronic neurological disorder	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	Smoking	<input type="checkbox"/> YES <input type="checkbox"/> Never smoked <input type="checkbox"/> Former smoker

*"WHO recommended ISARIC COVID-19 case report form (CRF). The CRF is not a study in itself, but a tool to facilitate the collection of standardised clinical data on patients hospitalised with suspected or confirmed infection with novel coronavirus (COVID-19)."*

<sup>2</sup> \*Nationales Netzwerk der Universitätsmedizin im Kampf gegen COVID-19

# Ziel und Vorgehensweise: Kern mit Erweiterungsmodulen



**Erweiterungsmodule**  
Radiologische Diagnostik  
Schwangerschaft  
Epidemiologie  
Intensivmedizin  
Pädiatrie  
Virologie  
Onkologie  
...

# FHIR Ressourcen Harmonisierung und Lokalisierung

Datenmodell verlangt „Geschlecht bei Geburt“ während FHIRs Core Specification auf AdministrativeGender verweist, hier müsste über mögliche Lösungsansätze diskutiert werden  
(Bsp: <https://www.hl7.org/fhir/us/core/StructureDefinition-us-core-birthsex.html>)

Name	Flags	Card.	Type	Description & Constraints
Patient	N		DomainResource	Information about an individual or animal receiving healthcare services. Elements defined in Ancestors: id, meta, implicitRule
identifier	Σ	0..*	Identifier	An identifier for this patient
active	?! Σ	0..1	boolean	Whether this patient's record is in active use
name	Σ	0..*	HumanName	A name associated with the patient
telecom	Σ	0..*	ContactPoint	A contact detail for the individual
gender	Σ	0..1	code	male   female   other   unknown AdministrativeGender (Required)
birthDate	Σ	0..1	date	The date of birth for the individual

# Verwendete Terminologien & FHIR Ressourcen

- SNOMED CT: Clinical Findings, Observable Entities
- LOINC: Laborparameter, Vitalparameter
- ICD-10-GM: Krankheiten, Symptome
- ATC: Arzneimittel, Substanzen
- UCUM: Maßeinheiten



- Patient (z.B. DEMOGRAPHIE)
- Consent (z.B. EINVERSTÄNDNISERKLÄRUNG)
- Observation (z.B. LABORWERTE, VITALWERTE)
- Condition (z.B. ANAMNESE / RISIKOFAKTOREN / KOMPLIKATIONEN)
- Procedure (z.B. BEHANDLUNG)
- Encounter (z.B. EINSCHLUSSKRITERIEN)
- Medication/MedicationStatement (z.B. MEDIKATION)

# Umsetzung in ART DECOR/ SIMPLIFIER gemäß nationaler Strategie der Medizininformatikinitiative des BMBF

 Covid-19 Forschungsdatensatz - Datasets







Concepts Covid-19 Forschungsdatensatz																																																																																					
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<ul style="list-style-type: none"> <li>+ Anamnese / Risikofaktoren</li> <li>+ Bildgebung</li> <li>+ Demographie</li> <li>+ Epidemiologische Faktoren</li> <li>- Komplikationen           <ul style="list-style-type: none"> <li>↳ Komplikationen</li> <li>↳ Krankheitsbeginn / Aufnahme</li> <li>↳ Laborwerte</li> <li>↳ Medikation</li> <li>↳ Outcome bei Entlassung</li> <li>↳ Studieneinschluss / Einstchlusskriterien</li> </ul> </li> <li>- Symptome           <ul style="list-style-type: none"> <li>↳ Symptome</li> <li>↳ Schweregrad</li> <li>↳ Therapie</li> <li>↳ Vitalparameter</li> </ul> </li> </ul>	<h3>Symptome</h3> <table border="1"> <tr> <td><b>Id</b></td> <td>covid19f-dataelement-1380</td> <td><b>Version</b></td> <td>2020-04-08</td> </tr> <tr> <td><b>Status</b></td> <td>Draft</td> <td><b>Version Label</b></td> <td></td> </tr> <tr> <td><b>Description</b></td> <td colspan="3">Symptome im Rahmen einer Covid-19 Erkrankung</td> </tr> <tr> <td><b>Terminology Association</b></td> <td><b>Code</b></td> <td><b>Display Name</b></td> <td><b>Codesystem</b></td> </tr> <tr> <td></td> <td>75325-1</td> <td>Symptom</td> <td>Logical Observation Identifier Names and Codes</td> </tr> </table> <table border="1"> <thead> <tr> <th colspan="4">Value</th> </tr> <tr> <th>Type</th> <th>Code</th> <th>Display Name</th> <th>Codesystem</th> </tr> </thead> <tbody> <tr> <td>Value Set Association</td> <td colspan="3">extensible Symptome (Dynamic) required Symptome Surrogat (Dynamic)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4">Concepts</th> </tr> <tr> <th>Concept</th> <th>Code</th> <th>Display Name</th> <th>Codesystem</th> </tr> </thead> <tbody> <tr> <td>Geruchs- bzw. Geschmacksstörungen</td> <td>36955009 44169009</td> <td>Loss of taste (finding) Loss of sense of smell (finding)</td> <td>SNOMED Clinical Terms SNOMED Clinical Terms</td> </tr> <tr> <td>Bauchschmerzen</td> <td>21522001</td> <td>Abdominal pain (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Bewusstseinsstörungen / Verwirrtheit</td> <td>40917007</td> <td>Clouded consciousness (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Durchfall</td> <td>62315008</td> <td>Diarrhea (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Erbrechen</td> <td>422400008</td> <td>Vomiting (disorder)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Husten</td> <td>49727002</td> <td>Cough (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Kurzatmigkeit (Dyspnoe)</td> <td>267036007</td> <td>Dyspnea (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Übelkeit</td> <td>422587007</td> <td>Nausea (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Fieber</td> <td>426000000</td> <td>Fever greater than 100.4 Fahrenheit / 38° Celsius (finding)</td> <td>SNOMED Clinical Terms</td> </tr> <tr> <td>Kopfschmerzen</td> <td>25064002</td> <td>Headache (finding)</td> <td>SNOMED Clinical Terms</td> </tr> </tbody> </table> <table border="1"> <tr> <td>Usage (0)</td> </tr> <tr> <td>History (2)</td> </tr> </table>			<b>Id</b>	covid19f-dataelement-1380	<b>Version</b>	2020-04-08	<b>Status</b>	Draft	<b>Version Label</b>		<b>Description</b>	Symptome im Rahmen einer Covid-19 Erkrankung			<b>Terminology Association</b>	<b>Code</b>	<b>Display Name</b>	<b>Codesystem</b>		75325-1	Symptom	Logical Observation Identifier Names and Codes	Value				Type	Code	Display Name	Codesystem	Value Set Association	extensible Symptome (Dynamic) required Symptome Surrogat (Dynamic)			Concepts				Concept	Code	Display Name	Codesystem	Geruchs- bzw. Geschmacksstörungen	36955009 44169009	Loss of taste (finding) Loss of sense of smell (finding)	SNOMED Clinical Terms SNOMED Clinical Terms	Bauchschmerzen	21522001	Abdominal pain (finding)	SNOMED Clinical Terms	Bewusstseinsstörungen / Verwirrtheit	40917007	Clouded consciousness (finding)	SNOMED Clinical Terms	Durchfall	62315008	Diarrhea (finding)	SNOMED Clinical Terms	Erbrechen	422400008	Vomiting (disorder)	SNOMED Clinical Terms	Husten	49727002	Cough (finding)	SNOMED Clinical Terms	Kurzatmigkeit (Dyspnoe)	267036007	Dyspnea (finding)	SNOMED Clinical Terms	Übelkeit	422587007	Nausea (finding)	SNOMED Clinical Terms	Fieber	426000000	Fever greater than 100.4 Fahrenheit / 38° Celsius (finding)	SNOMED Clinical Terms	Kopfschmerzen	25064002	Headache (finding)	SNOMED Clinical Terms	Usage (0)	History (2)
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# Lungenerkrankungen

Level/ Typ	Code	Anzeigename	Codesystem	Designations
0-L	195967001	Asthma (disorder)	SNOMED Clinical Terms	Synonym: Asthma
0-L	13645005	Chronic obstructive lung disease (disorder)	SNOMED Clinical Terms	Synonym: COPD
0-L	51615001	Fibrosis of lung (disorder)	SNOMED Clinical Terms	Synonym: Lungenfibrose
0-L	70995007	Pulmonary hypertension (disorder)	SNOMED Clinical Terms	Synonym: Lungenhochdruck/pulmonale Hypertonie
0-L	190966007	Extreme obesity with alveolar hypoventilation (disorder)	SNOMED Clinical Terms	Synonym: OHS
0-L	73430006	Sleep apnea (disorder)	SNOMED Clinical Terms	Synonym: Schlafapnoe
0-L	78275009	Obstructive sleep apnea syndrome (disorder)	SNOMED Clinical Terms	Synonym: OSAS
0-L	190905008	Cystic fibrosis (disorder)	SNOMED Clinical Terms	Synonym: Cystische Fibrose

# COVID-19 assoziierte Erkrankungen

Level/ Typ	Code	Anzeigename	Codesystem
0-L	840539006	Disease caused by 2019 novel coronavirus (disorder)	SNOMED Clinical Terms
0-L	840544004	Suspected disease caused by 2019 novel coronavirus (situation)	SNOMED Clinical Terms
0-L	882784691000119000	Pneumonia caused by severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms
0-L	674814021000119106	Acute respiratory distress syndrome caused by severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms
0-L	880529761000119102	Lower respiratory infection caused by severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms
0-L	138389411000119105	Acute bronchitis caused by severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms
0-L	866151004	Lymphocytopenia associated with severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms
0-L	866152006	Thrombocytopenia associated with severe acute respiratory syndrome coronavirus 2 (disorder)	SNOMED Clinical Terms

# 21783 Konzepte im Global Patient Set

726497006	1 Fluoroquinolone resistant Campylobacter (organism)	Fluoroquinolone resistant Campylobacter
726499009	1 Fluoroquinolone resistant Shigella (organism)	Fluoroquinolone resistant Shigella
726523002	1 Injury caused by low temperature (disorder)	Cold injury
726759005	1 Cuttlefish (substance)	Cuttlefish
726764009	1 Broad bean (substance)	Broad bean
732206003	1 Measles virus genotype F (organism)	Measles virus genotype F
732207007	1 Measles virus genotype E (organism)	Measles virus genotype E
732208002	1 Measles virus genotype D1 (organism)	Measles virus genotype D1
732209005	1 Measles virus genotype B1 (organism)	Measles virus genotype B1
732210000	1 Measles virus genotype G1 (organism)	Measles virus genotype G1
732230001	1 Dissection of coronary artery (disorder)	Dissection of coronary artery
732253000	1 Yersinia enterocolitica biotype 1A serotype O:19,8 (organism)	Yersinia enterocolitica biotype 1A serotype O:19,8
732254006	1 Yersinia enterocolitica serogroup O:19,8 (organism)	Yersinia enterocolitica serogroup O:19,8
732935002	1 Unit of presentation (unit of presentation)	Unit of presentation

